

The Columbellidae of Réunion Island

(Mollusca: Gastropoda)

by

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ABSTRACT

Twelve genera of Columbellidae occur on Réunion Island; of these, one genus (*Ascalista*, type species *Zafra polita* G. & H. Nevill, 1875) is described as new. 55 species are recorded for the region: of these, 11 species are new, viz. *Mitrella albofulvata*, *M. boucheti*, *M. raphaeli*, *M. reunionensis*, *M. suzannae*, *Pyreneola mascarenensis*, *Indomitrella haziersensis*, *I. kilburni*, *Zafra kaicherae*, *Aesopus rotundus*, *Parviterebra turiformis*. 16 new synonymies are proposed.

Neotypes are designated for the following species: *Columbella albinodulosa* Gaskoin, 1851; *C. azora* Duclos, 1840; *C. isomella* Duclos, 1840; *C. hanleyi* Deshayes, 1863. Type localities are designated for 12 species.

All species are illustrated and notes are given to aid identification.

INTRODUCTION

This paper is based on two main sources of material: i. Material collected by the authors both littorally (including lagoons) and by SCUBA-diving (including hand-dredging), at depths ranging down to 82 m, and, exceptionally, to 110 m. The distributions of species is based on the Drivas collection. ii. Material collected by P. Bouchet, B. Metivier and A. Warèn, during the MD32/Réunion expedition aboard *R.V. Marion-Dufresne* (1982). This expedition, under the direction of A. Guille, carried out ca. 110 dredge and trawl hauls around the island, at depths between 60 and 4 200 m. Expedition material was processed by V. Heros and A. Tillier, and fine fraction residues have been sorted by CENTOB, Brest, under the supervision of M. Segonzac. This collection is now deposited in MNHP.

Holotypes and neotypes of all species described / designated herein are deposited in MNHP, and one or more paratypes in NM.

ABBREVIATIONS

MNHP = Museum National d'Histoire Naturelle, Paris.

NM = Natal Museum, Pietermaritzburg.

TAXONOMY

Genus *Pyrene* Röding, 1798.

Type species (by monotypy) *Pyrene rhombiferum* Röding, 1798 [= *Buccinum punctatum* Bruguière, 1789].

Diagnosis: General shape biconical; early whorls with a strong spiral subsutural cord, which disappears on later whorls; interior of outer lip crenulated.

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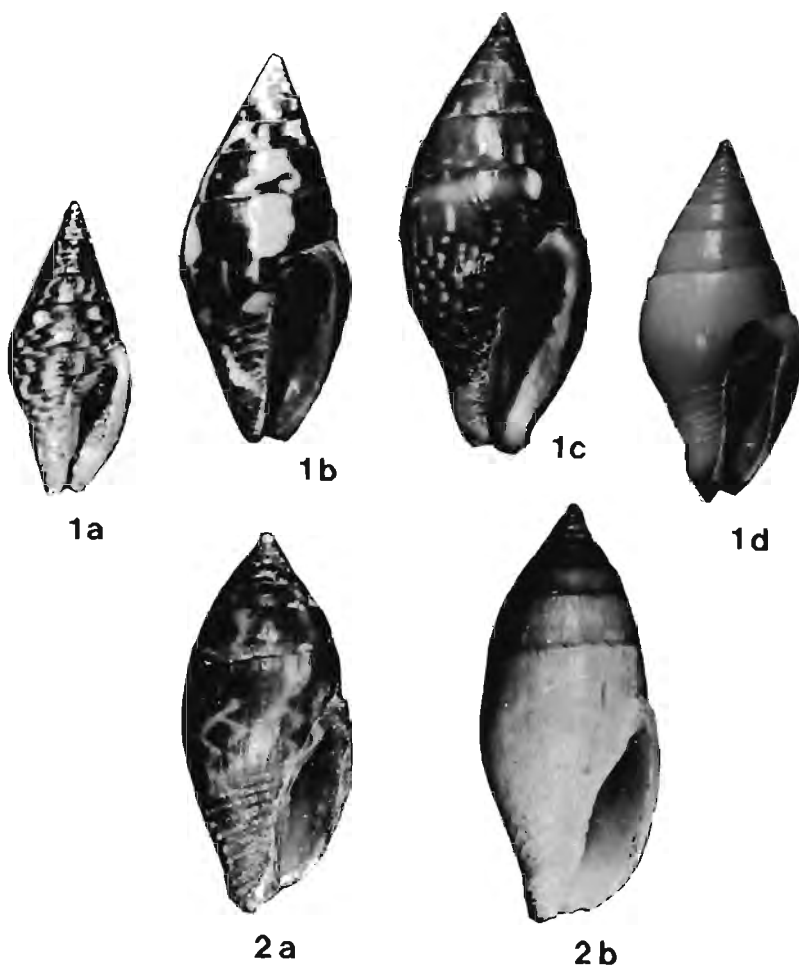
Pyrene flava (Bruguière, 1789)

Figs 1a–1d

Buccinum flavum Bruguière, 1789: 239, 281, without figure. (Type locality unknown.)*Columbella flava* Lamarck, 1822: 294, without figure; Kiener, 1841: 34, pl. 8, figs 3, 3a. (Type locality unknown.)*Colombella undata* Duclos, 1840: pl. 4, figs 3–4, without description. (Type locality unknown.)*Columbella lugubris* Kiener, 1841: 28–29, pl. 8, fig. 2 (Type locality: "Mer des Indes")*Columbella filmerae* Sowerby, 1900: 3, pl. 1, fig. 8. (Type locality: Pondoland, South Africa.)*Pyrene flava flava*; Kilburn, 1975: 591, fig. 9a.

Distribution: Widespread in the Indo-West Pacific.

Notes: The colour pattern, which consists of reddish-brown, wavy lines and irregular blotches on a cream background, is very variable. Specimens agreeing with the original illustrations of *Columbella undata* and *C. filmerae* are here



Figs 1–2. *Pyrene* species. *P. flava* (Bruguière, 1789) and *P. obtusa* (Sowerby, 1832). 1a–d, *P. flava*: a, length 17,7 mm; b, 20,5 mm; c, 23,4 mm; d, white form, 20,5 mm. 2a–b, *P. obtusa*: a, typical form, length 13,0 mm; b, unpatterned form, 14,2 mm.

figured (Figs 18a and c respectively). Protoconch of 1,5–2 smooth whorls. Adult length 10,6–23,4 mm.

Found alive under coral blocks or stones, inside lagoons or outside, at a depth of about 12 m, or shells found inside or outside lagoons down to a depth of 215 m. Common.

Pyrene obtusa (Sowerby, 1832)

Figs 2a–2b

Columbella obtusa Sowerby, 1832: 117, without figure; *idem*, 1844b: 120, pl. 32, figs 63, 64. (Type locality: Huahine Isl., Society Is.)

Colombella uvania Duclos, 1840: pl. 10, figs 5–6, without description. **Syn. n.** (Type locality unknown.)

Columbella funiculata Sowerby in Sowerby & Montrouzier, 1865: 157, pl. 5, fig. 8. **Syn. n.** (Type locality: New Caledonia.)

Pyrene obtusa; Kilburn, 1975: 590, fig. 8a.

Distribution: Widely spread in the Indo-West Pacific.

Notes: Colour pattern consists of angular cream marks on a reddish-brown background. Protoconch of 2 smooth whorls. Adult length 13–18 mm.

Our specimens have been compared with topotypes of *C. obtusa* from Polynesia, and of *C. funiculata* from New Caledonia, and were found to be identical. One syntype of *C. uvania*, which we examined in MNHP, is obviously a pale-coloured form of *C. funiculata*, agreeing with those we find on Réunion (Fig. 2b). *P. obtusa* differs from *P. flava* in its shorter and more ogival shell shape.

P. obtusa is known on Réunion by 3 shells found at a depth of 40 m.

Genus *Euplica* Dall, 1889

Type species (o.d.) *Columbella turturina* Lamarck, 1822.

Diagnosis: Characterised by its two columella folds, and a protoconch which bears fine axial striae.

Euplica albinodulosa (Gaskoin, 1851)

Fig. 3

Columbella albinodulosa Gaskoin, 1851: 3, without fig. (Type locality unknown.)

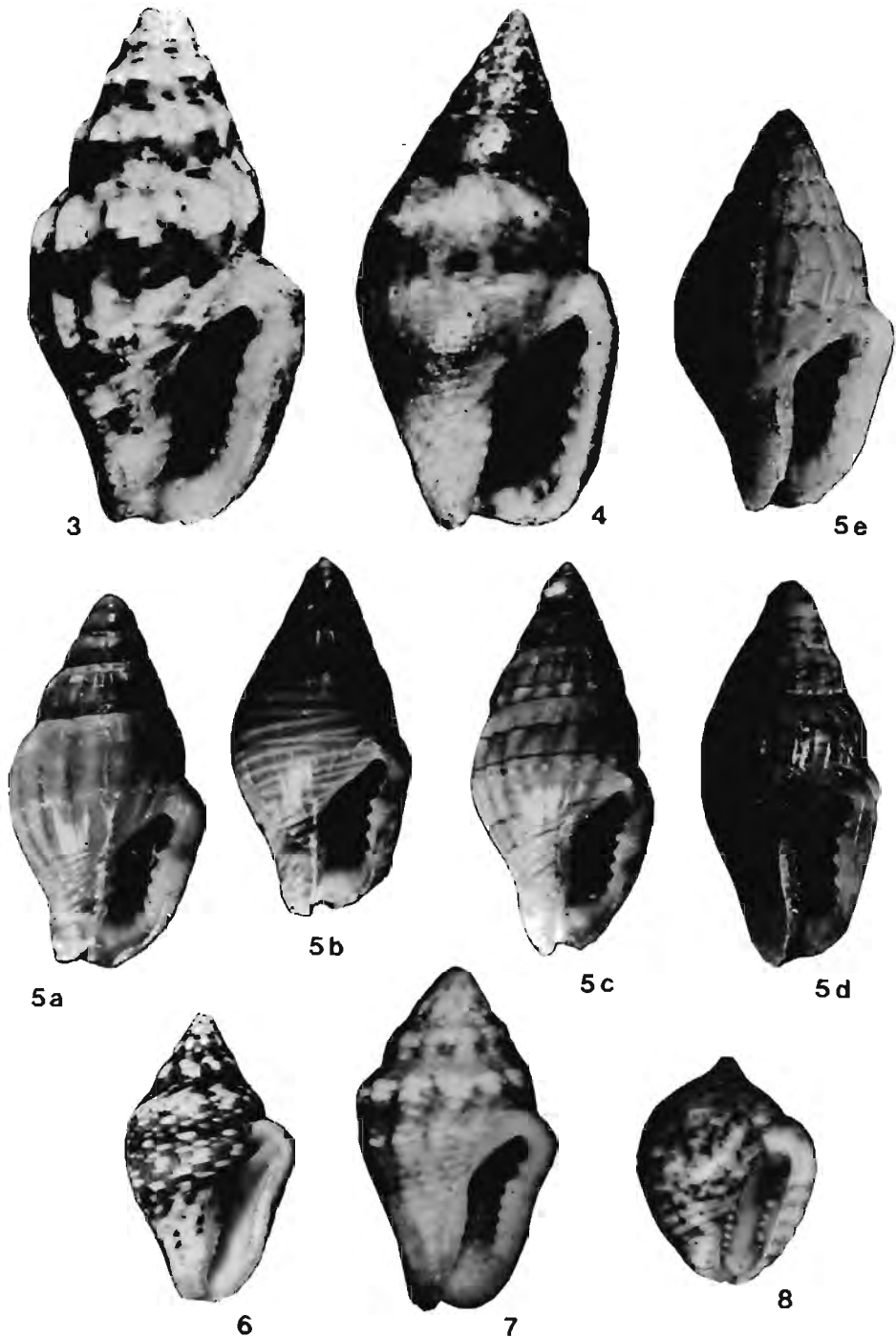
Columbella albinodulosa; Reeve, 1858, pl. 23, sp. 138; Fischer, 1901: 101, figs 3–4.

Notes: Axial ribs more or less marked, spiral striae stronger on base than on remaining part of body whorl. Ground colour greyish, with white blotches on crests of axial ribs, and a double spiral row of brown blotches on spire whorls, 3 double rows on body-whorl. Adult length 7–10,9 mm.

Found alive on algae at a depth of 12 m. Rare.

The type material of this species, according to S. D. Kaicher (1984) seems to be lost; hence we design a neotype (Fig. 3), deposited in the British Museum (Natural History) – dimensions 10,4 × 5,5 mm. Type locality, here designated, Cap la Houssaye, Saint Paul, Réunion Island, on algae in 12 m.

Distribution: Gulf of Aden to Réunion, Comores, Madagascar and other islands of the Western Indian Ocean.



Figs 3–8. *Euplicea* species. 3, *E. albinodulosa* (Gaskoin, 1851), neotype, length 10,4 mm. 4, *E. azora* (Duclos, 1840), neotype, length 10,7 mm. 5a–e, *E. ionida* (Duclos, 1840), various colour forms: a, typical form, length 4,7 mm; b, 4,9 mm; c–e, length 5,2 mm, 5,1 mm and 5,3 mm respectively. 6, *E. scripta* (Lamarck, 1822), length 18,4 mm. 7, *E. varians* (Sowerby, 1832), length 6,4 mm. 8, *E. turturina* (Lamarck, 1822), length 10,2 mm.

Euplica azora (Duclos, 1840)

Fig. 4

Colombella azora Duclos, 1840: pl. 12, figs 3–4, without description; Kiener, 1841: 17, pl. 6, figs 3, 4. (Type locality unknown.)

Notes: Distinguished from *E. albinodulosa* by a single character, namely its spiral rows of brown spots which are single instead of double. Protoconch of 1,5 to 2 whorls. Adult length 8,1–11,1 mm.

On Réunion found alive on algae, 12 m deep. Rare.

Type material is not present in MNHP and is presumed to be lost; consequently we here designate a neotype (Fig. 4), which is deposited in MNHP; dimensions 10,7 × 5,6 mm. Type locality: 4°41'S:55°27'E, off Northolme Hotel, Mahé Island, Seychelles, 15 m on algae, J. Drivas. The species is fairly abundant in the Seychelles, which was the first locality ascribed to the species (Kiener 1841).

Distribution: Gulf of Aden to Réunion, Mauritius and Seychelles.

Euplica ionida (Duclos, 1840)

Figs 5a–5e

Colombella ionida Duclos, 1840: pl. 7, figs 5–8, without description. (Type locality unknown.)

Columbella scalpta Reeve, 1859: pl. 37, sp. 235. *Syn. n.* (Type locality unknown.)

Columbella amirantium Smith, 1884: 494, pl. 44, fig. K. *Syn. n.* (Type locality: Eagle Isl., Amirantes.)

Columbella amirantium var. *ovata* Hervier, 1899: 315. (Type locality: Lifu, New Caledonia.)

Columbella scalpta var. *decora* Hervier, 1899: 311. *Syn. n.* (Type locality: Lifu, New Caledonia.)

Columbella liocyma Pilsbry, 1904: 14, pl. 3, fig. 24 (Type locality: Japan.)

Notes: Protoconch of about 4,5 finely axially costate whorls. Adult shell biconical, variable in shape and colour; number of axial ribs varying from 14 to 28 on penultimate whorl. Development of axial ribs on last whorl also variable: these sometimes extend to base, sometimes to midwhorl, and in other individuals they evanesce; more rarely, several or even all whorls may be smooth. A syntype of *ionida* in MNHP that we examined bears 16 full axial ribs. Ground colour varies from dark pink to creamy white or yellowish, with a variable pattern of spiral rows of white blotches and darker spiral lines. Spiral striae are limited to the base. The columella bears a single denticle, which does not conform with the other species in this genus. However, Sleurs (1982: 197) considers it as a member of this genus, on account of the sculpture of its protoconch. Adult length varies from 3,2 to 6,2 mm.

The variation that we have observed in a sample of more than 1 000 specimens includes forms quite identical to the type-figures of *C. liocyma*, *C. scalpta*, and *C. amirantium*, and all intermediates between these and quite typical specimens of *C. ionida* are present. *C. liocyma* was based on slender specimens, and *C. scalpta* has a particular pattern of zigzag lines, but intermediates exist. A specimen agreeing with the type figure of *C. scalpta* is here illustrated (Fig. 5b). Other colour patterns are without specific names.

Empty shells found on Réunion at depths ranging from 12 to 310 m; alive under stones at 12 m. deep. Common on Réunion, which is here designated as type locality.

Distribution: Réunion to Natal and Japan.

Euplica scripta (Lamarck, 1822)

Fig. 6

Columbella scripta Lamarck, 1822 (*non Murex* [= *Mitrella*] *scripta* Linne, 1758): 295, without fig.; Kiener, 1841: 50, pl. 6, figs 3–3a. (Type locality unknown.)

Columbella versicolor Sowerby, 1832: 119, without fig.; *idem*, 1844b: 117, pl. 37, figs 41–46. (Type locality: Anaa or Chain Isl.)

Colombella coronata Duclos, 1840: pl. 8, figs 11–12, without description. (Type locality unknown.)

Colombella araneosa Kiener, 1841: 49, pl. 9, fig. 4. **Syn. n.** (Type locality: Indian Ocean.)

Notes: Differs from *E. turturina* in its more elevated spire, and in its complex colour pattern, comprising white and brown blotches on a pale fawn background. Protoconch not seen. Length 16,9 mm.

Empty shells found on Réunion at a depth of 12 m. Rare.

Distribution: Réunion and Mauritius to Indo-West Pacific.

Euplica turturina (Lamarck, 1822)

Fig. 8

Columbella turturina Lamarck, 1822: 296, without fig.; Kiener, 1841: 16, pl. 11, fig. 5. (Type locality unknown.)

Columbella palumbina Gould, 1845: 27, without figure. (Type locality: Sandwich Isl. [= Hawaii].)

Columbella sandwichensis Pease, 1861: 244, without figure. (Type locality: Sandwich Isl. [= Hawaii].)

Notes: Protoconch of about 3,5 finely axially costate whorls. Spire of adult shell very low, outer lip strongly denticulated, lower half of columella bearing 5 denticles. Colour pattern very variable, ranging from plain white to orange with faint brown blotches; aperture is always vivid violet. Adult length 9,9–14,7 mm.

Collected live under stones at 12 m.

The type locality being unknown, we here designate Réunion Island, where the species is fairly abundant.

Distribution: Widely spread in the Indo-West Pacific.

Euplica varians (Sowerby, 1832)

Fig. 7

Columbella varians Sowerby, 1832: 118, without fig.; *idem*, 1844b: 117, pl. 37, figs 47–50. (Type locality: Galapagos Island.)

Colombella nana Duclos, 1840: pl. 8, figs. 4–6, without description. **Syn. n.** (Type locality unknown.)

Columbella nana Michaud in Kiener, 1841: 53, pl. 14, figs 4–4a. (Type locality unknown.)

Columbella poecila Sowerby, 1844a: 48, without fig.; *idem*, 1844b: 118, pl. 37, figs 51, 52. (Type locality: Matnog Island, Philippines.)

Columbella pallida Deshayes, 1844 (**nom. n. pro C. nana** Kiener, 1841): 278.

Columbella pacifica Gaskoin, 1851: 4, without fig. (Type locality: Hawaii.)

Columbella varians var. *clarescens* Hervier, 1899: 311. (Type locality: New Caledonia.)

Columbella varians var. *lucescens* Hervier, 1899: 312. (Type locality: New Caledonia.)

Columbella varians var. *lucida* Hervier, 1899: 312. (Type locality: New Caledonia.)

Columbella varians var. *maculifera* Hervier, 1899: 312. (Type locality: New Caledonia.)

Columbella varians var. *fulvescens* Hervier, 1899: 312. (Type locality: New Caledonia.)

Columbella varians var. *scalaris* Hervier, 1899: 312. (Type locality: New Caledonia.)

Columbella poecila var. *persignata* Hervier, 1899: 313. (Type locality: New Caledonia.)

Notes: Protoconch of about 3,5 finely axially ribbed whorls; Teleoconch with a subsutural row of more or less distinctly developed nodules, which may be prolonged by axial ribs. Spiral striae may extend over the whole shell, or be limited to the base. All intermediates exist between these forms, and after studying over

1 000 specimens, we conclude that it is quite impossible to separate more than one species, and that synonyms include *C. nana*. Colour varies from white to light brown, with irregular white blotches throughout and particularly on shoulder. Adult length varies from 5,8 to 10,2 mm.

Found alive under stones down to 12 m, or in pools, also empty shells found on beaches. Common.

Distribution: Widely spread in the Indo-West Pacific.

Genus *Mitrella* Risso 1826

Type species (s.d. Cox 1922) *Mitrella scripta* (Linne, 1758) (Mediterranean).

Diagnosis: Protoconch smooth. Spire turreted, high compared to aperture; surface is smooth or spirally sculptured; outer lip of aperture denticulate.

Mitrella alabastroides (Kobelt, 1893)

Fig. 9

Columbella alabastrum von Martens, 1880 (*non* Reeve, 1859): 247, pl. 20, fig. 13. (Type locality: Mauritius.)

Columbella alabastroides Kobelt, 1893: 167, pl. 23, fig. 5 (**nom. n.**).

Columbella alabastroides var. *illibata* Hervier, 1899: 38. (Type locality: Lifu, New Caledonia.)

Notes: Protoconch of about 1,5 smooth whorls. Adult whorls slightly convex. Colour creamy white with slightly darker blotches. Length 5,7–8,2 mm.

This species is known to the authors from a single shell found on Mauritius, in sand at a depth of 55 m and 49 empty shells, collected at 21°05'S:55°12'E by the *Marion-Dufresne* expedition at depths between 170 and 225 m (stn DC56).

Distribution: Known only from Mauritius and Réunion.

Mitrella albina (Kiener, 1841)

Figs 10a–10b

Columbella albina Kiener, 1841: 32, pl. 13, fig. 4. (Type locality unknown.)

Columbella egeria Duclos, in Chenu, 1848: pl. 4, figs 19–20, without description. (Type locality unknown.)

Columbella annulata Reeve, 1859: pl. 19, sp. 101. (Type locality: Australia.)

Columbella albina var. *albaria* Hervier, 1899: 321. (Type locality: New Caledonia.)

Columbella albina var. *nubila* Hervier, 1899: 321. (Type locality: New Caledonia.)

Columbella albina var. *polychroa* Hervier, 1899: 321 (Type locality: New Caledonia.)

Columbella albina var. *zonifera* Hervier, 1899: 323 (Type locality: New Caledonia.)

Columbella albina var. *carneola* Hervier, 1899: 323. (Type locality: New Caledonia.)

Columbella albina var. *straminea* Hervier, 1899: 324. (Type locality: New Caledonia.)

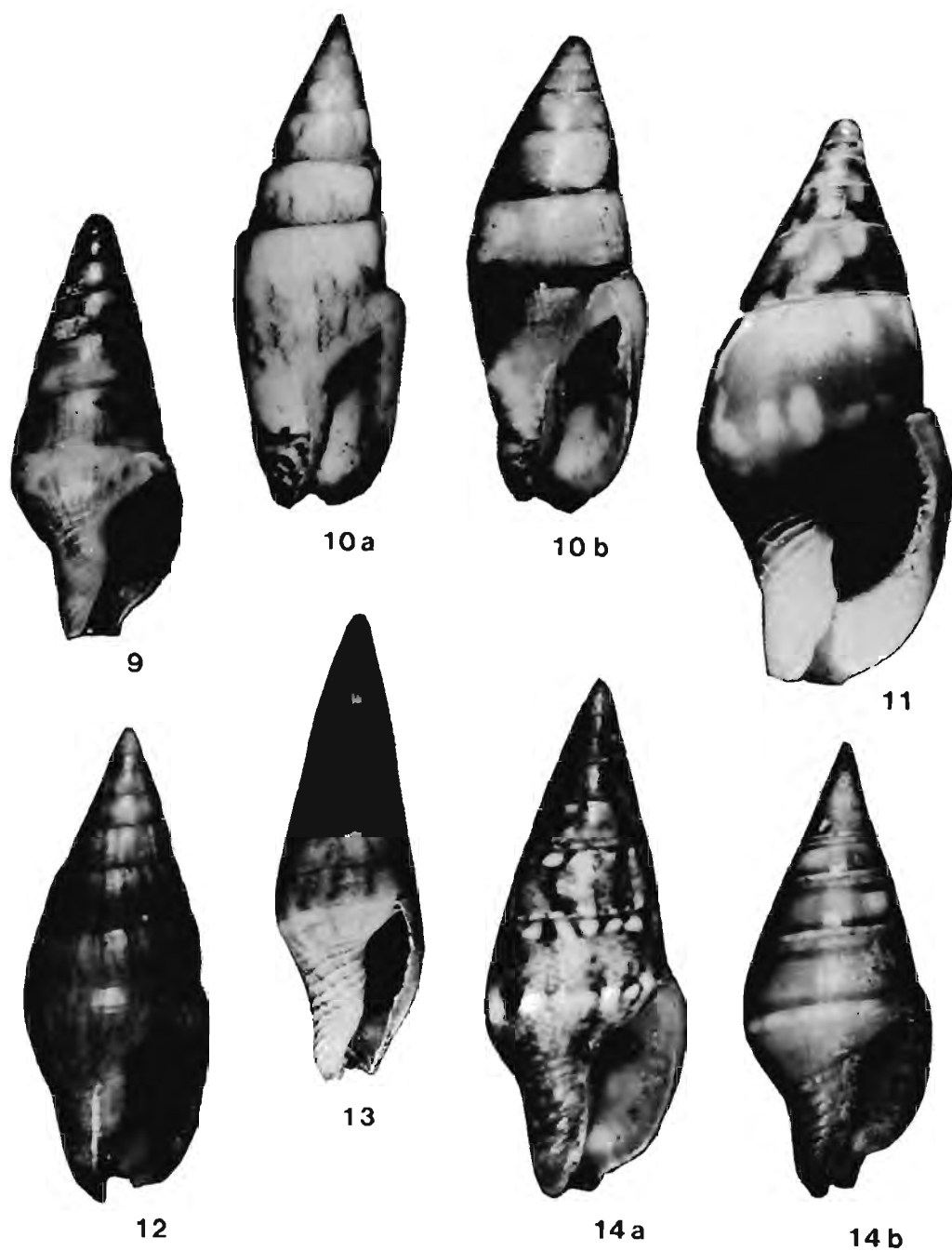
Columbella albina var. *agonatodes* Hervier, 1899: 324. (Type locality: New Caledonia.)

Notes: Protoconch of about 2,5 smooth whorls. Teleoconch with a subsutural row of large nodules which are not always present. Colour greyish white, with white nodules and obsolete irregular brown blotches; base of rostrum with a fairly characteristic brown blotch. Adult length varies from 13,1 to 17,8 mm.

Found alive in sand, 12 m deep. Rare.

No type locality was given by Kiener, so we select here Réunion Island, where the species is fairly abundant. A specimen agreeing with the type figure of *Columbella annulata* is here illustrated (Fig. 10b).

Distribution: Réunion to western Pacific.



Figs 9–14, *Mitrella* species. 9, *M. alabastroides* (Kobelt, 1893), length 6,4 mm. 10a–b, *M. albina* (Kiener, 1841): a, length 15,3 mm; b, 13,4 mm. 11, *M. albofulvata* sp. n., holotype, length 8,8 mm. 12, *M. sp. cf. angelia* (Duclos, 1846), length 11,0 mm. 13, *M. boucheti* sp. n., holotype, length 8,9 mm. 14a–b, *M. conspersa* (Gaskoin, 1851): a, length 12 mm; b, 10,4 mm.

Mitrella albofulvata sp. n.

Fig. 11

Description: Spire of shell slightly higher than aperture; teleoconch of 5 slightly convex whorls, suture deep; sculptured by a subsutural groove and 15 spiral cords on base of last whorl, remaining part of surface smooth, or bearing very fine spiral striae. Columella with 4 denticles; outer lip with 14 lirae inside aperture. Colour pale fawn, with 2 spiral rows of irregular white blotches that sometimes join axially. Protoconch of 2 smooth whorls. Dimensions: $8,8 \times 3,9$ mm (holotype); adult length varies from 7,5 to 10,2 mm.

Distribution: off Réunion in 280–375 m, and Mauritius in 35 m.

Type material: Holotype (Fig. 11) in MNHP, *Marion-Dufresne* Stn DC 27, $21^{\circ}22'S$, $55^{\circ}47'E$, 290–310 m. Paratypes: 27 from Stn DC 128, $20^{\circ}51'S$, $55^{\circ}36'E$, 280–340 m; 3 from Stn DS 131, $20^{\circ}51'S$, $55^{\circ}37'E$, 345–375 m; 1 from same station as holotype. A single paratype from Mauritius, off Flic en Flac in sand from a depth of 55 m, J. Drivas. All paratypes in MNHP, except for one paratype which deposited in the NM (NM K3977/T60). All types are empty shells.

Notes: This species is closest to *M. helena* (Thiele, 1925) from the Agulhas Bank, South Africa, but differs in its shape and colour pattern. It is also comparable with some colour forms of *Mitrella* (*Paratilia*) *alizonae* (Melvill & Standen, 1901) from the Persian Gulf; as compared with topotypes of *alizonae*, *M. albofulvata* differs in its less ventricose shape and in possessing a subsutural groove; also, *alizonae* has 4 strong labral denticles and 3 protoconch whorls, whereas *albofulvata* has 14 lirae and two whorls respectively.

Etymology: *albofulvata* refers to its bicoloured pattern.

Mitrella cf angelia (Duclos 1848)

Fig. 12

Colombella angelia Duclos in Chenu, 1848: pl. 14, figs 19–20, without description. (Type locality unknown.)

Notes: Identification uncertain, as the only Réunion record is an 11 mm juvenile shell found under a stone at a depth of 5 m. Pale violet-brown, dotted with white spots.

Mitrella boucheti sp. n.

Fig. 13

Description: Shape narrowly fusiform, spire twice height of aperture; whorls slightly convex, with shallow suture; most specimens smooth, although occasionally with growth-lines, which may develop into oblique ribs, parallel to aperture; a total of 10 whorls including a poorly demarcated protoconch of about 2,5 whorls. Outer lip expanded, columella concave, aperture margins without any denticles, base truncated. Ground colour creamy white, patterned with fine brown spiral lines and wider axial lines. Dimensions: $8,9 \times 2,8$ mm (holotype); length varies from 8,2 to 10,1 mm.

Distribution: Known only from off Réunion Island in 70–225 m.

Type material: Holotype (Fig. 13) in MNHP; dredged by *Marion-Dufresne* expedition, Stn FA 39, 21°21'S, 55°28'E, 70 m. Paratypes, 3 from same station; 4 from Stn DC 56, 21°05'S, 55°12'E, 170–225 m. Also 1 paratype found in hand-dredged sand, at a depth of 70 m, off Boucan-Canot, Réunion, in J. Drivas colln. All other paratypes in MNHP, except for one in the NM (NM K3978/T61).

Notes: This species appears to be unique on account of its colour pattern.

Etymology: Named in honour of Dr Philippe Bouchet of the Museum National d'Histoire Naturelle.

Mitrella conspersa (Gaskoin, 1851)

Figs 14a–b

Columbella conspersa Gaskoin, 1851: 11, without figure; Reeve, 1859: pl. 10, sp. 99. (Type locality unknown.)

Columbella contaminata Gaskoin, 1851: 7, without figure; Reeve, 1859: pl. 19, fig. 102. (Type locality unknown.)

Columbella (Mitrella) sigaloessa Melvill & Standen, 1896 276, pl. 9, fig. 6. (Type locality: Lifu, New Caledonia.)

Columbella conspersa var. *diluta* Hervier, 1899: 351. (Type locality: Lifu, New Caledonia.)

Columbella conspersa var. *intermerata* Hervier, 1899: 352. (Type locality: Lifu, New Caledonia.)

Columbella conspersa var. *suspecta* Hervier, 1899: 352. (Type locality: Lifu, New Caledonia.)

Columbella conspersa var. *circulata* Hervier, 1899: 352. (Type locality: Lifu, New Caledonia.)

Mitrella (Mitrella) bella (non Reeve, 1859); Springsteen, 1986: 173, pl. 46, no 14.

Notes: Protoconch of about 1.5 smooth whorls. Colour pattern of teleoconch variable, but the white and brown subsutural band that continues onto the body whorl is constant; aperture purple-tinted in adult specimens. Adult length varies from 8.2 to 14.2 mm.

Empty shells found at depths ranging from 12 to 310 m. Common.

As Gaskoin did not give a type locality, we here designate Réunion Island, where the species is common.

Although Cernohorsky (1972: 137) synonymised *C. conspersa* with *Indomitrella puella* (Sowerby, 1844), the latter differs in a number of characters, notably in the presence of axial ribs. A specimen agreeing with the type figure of *Columbella sigaloessa* is here illustrated (Fig. 14b).

Distribution: Philippines and New Caledonia to Réunion and Mauritius.

Mitrella goubini (Hervier, 1899).

Figs 15a–b

Columbella goubini Hervier, 1899: 332, pl. 13, fig. 1. (Type locality: Lifu, New Caledonia.)

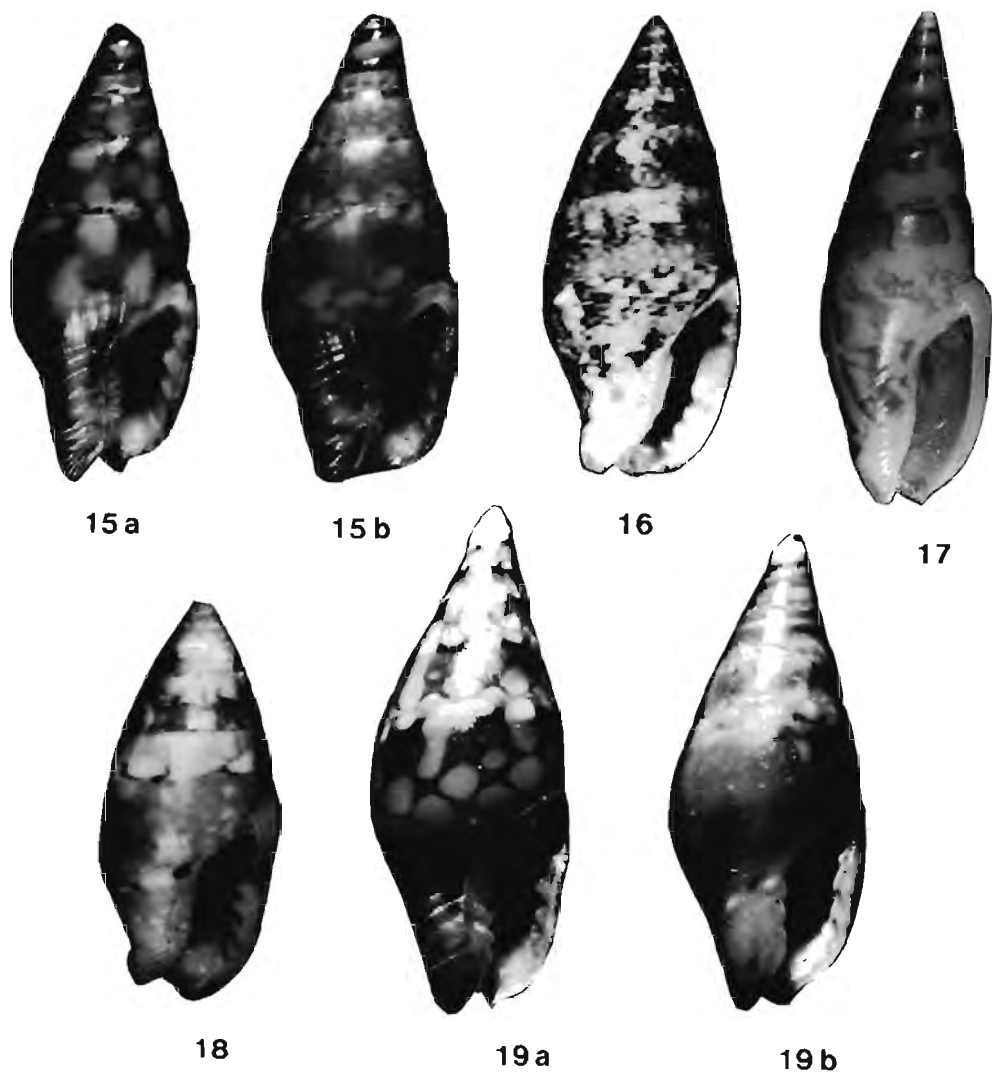
Notes: Protoconch of about 1.5–2 smooth whorls. Ground colour of teleoconch varying from white to dark reddish-brown, usually with two rows of widely-spaced brown blotches, but may bear a single row or lack them altogether; shape varying in plumpness.

Maximum length 6.1 mm.

Empty shells found from 0 to 225 m, sometimes alive under stones at 12 m. Common.

Our specimens have been compared with topotypes.

Distribution: Réunion and Mauritius to New Caledonia.



Figs 15–19. *Mitrella* species. 15a–b, *M. goubini* (Hervier, 1899): a, length 4,5 mm, b, length 5,2 mm. 16, *M. hanleyi* (Deshayes, 1863), neotype, length 8,1 mm. 17, *M. ligula* (Duclos, 1840), length 18,3 mm. 18, *M. margarita* (Reeve, 1859), length 8,5 mm. 19a–b, *M. molculina* (Duclos, 1840): a, length 6,4 mm; b. white individual, 6,9 mm.

Mitrella hanleyi (Deshayes, 1863)

Fig. 16

Columbella hanleyi Deshayes, 1863: 131, pl. 13, fig. 8. (Type locality: Réunion).

Notes: This species differs from *M. margarita* (Reeve, 1859) of the tropical Indo-Pacific, in its spire being higher than the aperture, in its more slender shape, and in details of colour pattern. Colour pattern consists of a spiral row of white blotches and wavy brown axial lines (which do not reach the lower part of the whorl and are interrupted at the mid-body whorl level), on a cream ground; the median band often bears ill-defined pale brown blotches. Protoconch of 1,5 smooth white whorls. Adult length varies from 6 to 8,3 mm.

Empty shells commonly found on beaches and on a sandy bottom at 12 m, and one specimen was found alive under a stone at this depth; two specimens were dredged at 205–215 m by the *Marion-Dufresne*.

We could not locate type material in MNHP and conclude it to have been lost. A neotype (Fig. 16), here designated, in MNHP; dimensions 8,1 × 3,5 mm, locality off Cap la Houssaye, Saint Paul, Réunion Is., 12 m on sand.

Mitrella ligula (Duclos, 1840)

Fig. 17

Colombella ligula Duclos, 1840: pl. 11, figs 11–16, without description. (Type locality unknown.)
Columbella ligula; Kiener, 1841: 25, pl. 13, fig. 2.

Notes: Shell smooth except for 10 spiral striae on base of body whorl. The single known Réunion example is patterned with a subsutural spiral row of wide quadrangular brown blotches on a white background and with other brown markings on the body whorl. Protoconch not seen. Length 18,3 mm.

Found on Réunion as empty shells on a sand bottom, 70 m deep.

No type locality was given by Duclos; we here designate Mauritius, where the species seems to be more common than on Réunion.

Distribution: Widespread in the tropical Indo-West Pacific.

Mitrella margarita (Reeve, 1859)

Fig. 18

Columbella margarita Reeve, 1859: pl. 27, sp. 168. (Type locality: Sandwich Islands [= Hawaii]).

Notes: Teleoconch with a subsutural spiral row of quadrangular white blotches. Maximum length 8,7 mm.

Empty shells found at 12 m. Rare on Réunion.

Distribution: Réunion and Mauritius to Philippines and Hawaii.

Mitrella moleculina (Duclos, 1840)

Figs 19a–b

Colombella moleculina Duclos, 1840: pl. 9, figs 1–2, without description. (Type locality unknown.)

Notes: Protoconch of 3,5 smooth whorls. Colour pattern on teleoconch is characteristic, consisting of round white blotches on a fawn ground and an interrupted brown subsutural line. Breadth variable. Maximum length 7,3 mm.

Empty shells found on beaches, or in sand at depths down to 215 m; collected alive under stones at 12 m. Common.

No type locality was given by Duclos, so we here designate Réunion Island.

Columbella lactea Duclos (1840: pl. 1, figs 3, 4) may have been based on an albino specimen of this species.

Distribution: Widespread in the tropical Indo-West Pacific.

Mitrella nympha (Kiener, 1841)

Figs 20a–d

- Columbella nympha* Kiener, 1841: 29, pl. 10, fig. 4. (Type locality: Ocean Indien, Seychelles.)
Columbella galaxias Reeve, 1859: pl. 36, sp. 229. **Syn. n.** (Type locality unknown.)
Columbella nubeculata Reeve, 1859: pl. 37, sp. 234. **Syn. n.** (Type locality unknown.)
Columbella articulata Souverbie, in Souverbie & Montrouzier, 1864: 271, pl. 10, fig. 5. **Syn. n.** (Type locality: Art Island, New Caledonia.)
Columbella carolinae Smith, 1876: 541, pl. 30, fig. 9. **Syn. n.** (Type locality: Strong Island, Caroline Islands.)
Columbella galaxias var. *excolescens* Hervier, 1899: 341. (Type locality: Lifu, New Caledonia.)
Columbella nubeculata var. *obnubila* Hervier, 1899: 341. (Type locality: Lifu, New Caledonia.)
Columbella carolinae var. *bifloccata* Hervier, 1899: 341. (Type locality: Lifu, New Caledonia.)
Columbella carolinae var. *nivosula* Hervier, 1899: 341. (Type locality: Lifu, New Caledonia.)
Columbella articulata var. *subnympha* Hervier, 1899: 336. (Type locality: Lifu and Isle of Pines, New Caledonia.)
Columbella articulata var. *retiaria* Hervier, 1899: 336. (Type locality: Lifu, New Caledonia.)
Columbella articulata var. *pallidior* Hervier, 1899: 336. (Type locality: Lifu, New Caledonia.)
Columbella articulata var. *flavidula* Hervier, 1899: 337. (Type locality: New Caledonia.)
Pyrene sp.; Maes, 1967: 134, pl. 12, fig. 1.

Notes: Shell fusiform in shape, with a very variable colour pattern of golden to greyish axial lines on white background; outer lip may be brown-tinted. Length varies from 8,4 to 10,6 mm.

Found alive on algae, 3–12 m deep. Uncommon.

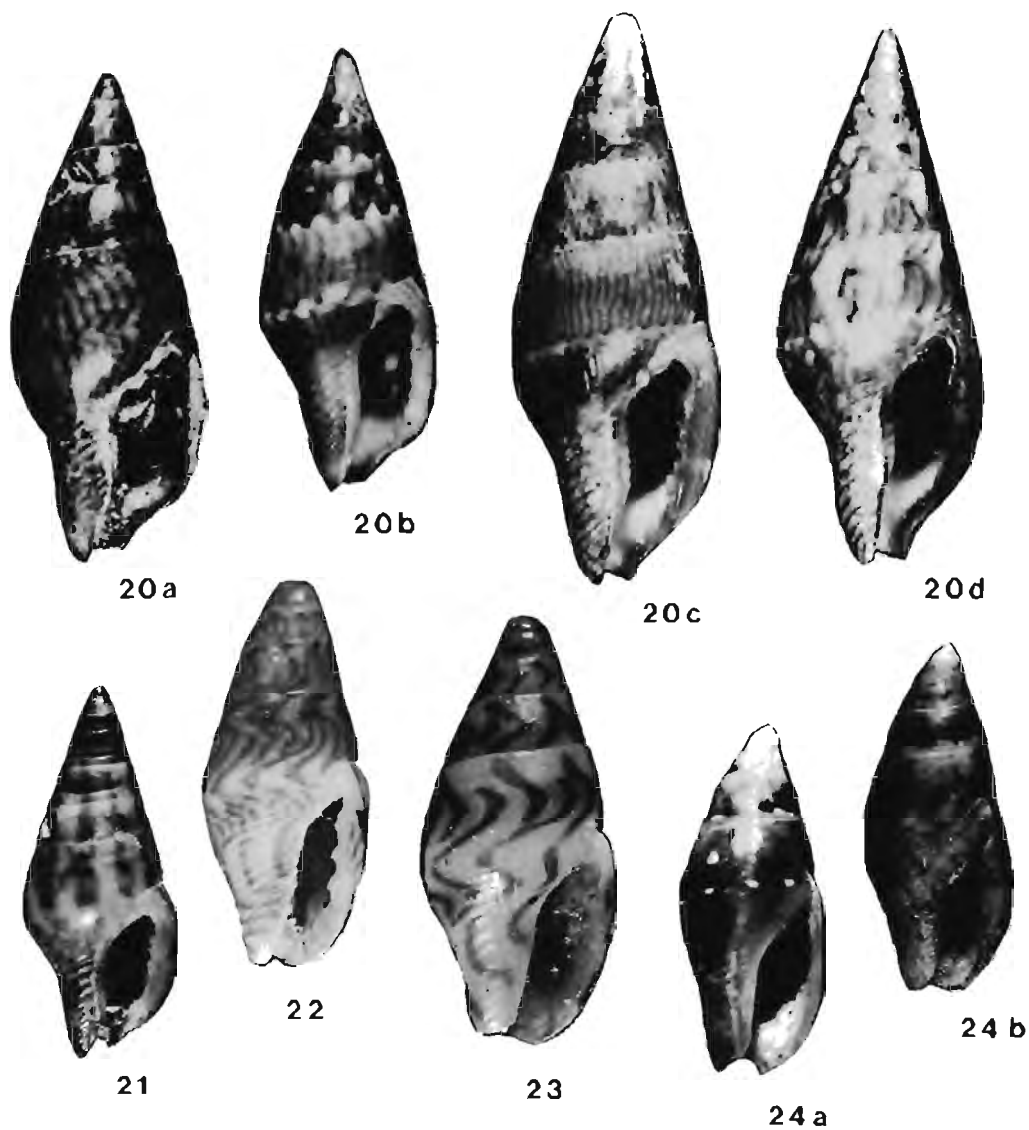
On Réunion we have collected not only typical examples of *nympha* and specimens similar to each of the taxa listed in the synonymy, but intermediates between them, and four additional specimens which do not match any described form. All of these are obviously colour variants of a single species. Individuals agreeing with the type figures of *Columbella nubeculata*, *C. articulata* and *C. galaxias* are here illustrated (Fig. 20b, c and d, respectively).

Distribution: Indo-West Pacific to Réunion.

Mitrella loyaltyensis (Hervier, 1899)

Fig. 21

- Columbella loyaltyensis* Hervier, 1899: 43, pl. 13, fig. 4. (Type locality: Lifu, New Caledonia.)
Columbella loyaltyensis var. *mundata* Hervier, 1899: 44. (Type locality: Lifu.)
Columbella loyaltyensis var. *latefloccata* Hervier, 1899: 45. (Type locality: Lifu.)
Columbella loyaltyensis var. *lucidior* Hervier, 1899: 45. (Type locality: Lifu.)
Columbella psilla (non Duclos, 1846); Hervier, 1899: 41.
Columbella psilla var. *obsolescens* Hervier, 1899: 345. **Syn. n.** (Type locality: Lifu, New Caledonia.)
Columbella psilla var. *regelata* Hervier, 1899: 346. **Syn. n.** (Type locality: Lifu, Caledonia.)
Columbella psilla var. *pullula* Hervier, 1899: 346. **Syn. n.** (Type locality: Lifu, New Caledonia.)
Columbella psilla var. *niphetodes* Hervier, 1899: 346. **Syn. n.** (Type locality: Lifu, New Caledonia.)
Columbella psilla var. *annulatula* Hervier, 1899: 346. **Syn. n.** (Type locality: Lifu, New Caledonia.)
Columbella psilla var. *vitifera* Hervier, 1899: 346. **Syn. n.** (Type locality: Lifu, New Caledonia.)



Figs 20-24. *Mirrella* species. 20a-d, *M. nymphe* (Kiener, 1841): a, length 9,7 mm; b, 9,3 mm; c, 9,8 mm; d, 10,6 mm. 21, *M. loyaliensis* (Hervier, 1899), length 6,5 mm. 22, *M. raphaeli* sp. n., holotype, length 4,2 mm. 23, *M. reunionensis* sp. n., holotype, length 4,4 mm. 24a-b, *M. rorida* (Reeve, 1859): a, length 6,4 mm; b, 6,8 mm.

Notes: Spire high, as in *M. nympha*, but colour pattern distinctive, with round clear blotches on base which are not found in *nympha*. Length 6,5 mm.

Known on Réunion from a single shell found in sand at 12 m. This example was compared with topotypes from New Caledonia and considered to be conspecific.

Distribution: Réunion and Mauritius to New Guinea and New Caledonia.

***Mitrella raphaeli* sp. n.**

Fig. 22

Description: Shape ovate, length of aperture equal to spire. Protoconch of about 1,5 smooth whorls; teleoconch of 3 slightly convex whorls. Teleoconch entirely smooth, except for base and lower part of body whorl where there are 16 spiral striae. Interior of outer lip with 4 denticles, columella smooth. Colour creamy white, patterned with a subsutural spiral row of brown blotches, followed anteriorly by a row of brown herring-bone axial lines. Dimensions 4,2 × 1,8 mm (holotype); 4,1 × 1,8 mm (paratype).

Distribution: At present known only from Réunion Island.

Type material: Holotype (MNHP) from off Boucan Canot in 55 m, in hand-dredged sand. 4 Paratypes in Drivas colln, from beach at Boucan Canot.

Notes: This species was probably that recorded from Mauritius by Viader (1937: 29) and von Martens (1880: 248), and from Réunion by Deshayes (1863: 442), under the name *Columbella pusilla* Sowerby, 1844. Although the holotype of that West Indian species cannot now be located in the British Museum (Natural History) (Ms K. Way, *in lit.* to R. Kilburn), Sowerby's figure (1844b: pl. 40, figs 182, 183) shows a markedly more biconical shape and sharper apex than *raphaeli*.

Etymology: Named after Raphael Drivas, son of the senior author, who discovered the second specimen.

***Mitrella regnardi* (Viader, 1938)**

Fig. 43

Pyrene regnardi Viader, 1938: 5, pl. 2, figs 19–20. (Type locality: Mauritius.)

Notes: Protoconch of about 1,5 smooth whorls. Teleoconch with undulating brown axial lines and a subsutural row of small, alternate white and brown blotches.

Known on Réunion from a single shell found in hand-dredged sand from 55 m; length 1,2 mm.

Distribution: Mauritius and Réunion.

***Mitrella reunionensis* sp. n.**

Fig. 23

Description: Shell rather ovate in shape, spire slightly higher than aperture. Protoconch of about 1,5 smooth whorls. Teleoconch of 4 slightly convex whorls, suture distinct; surface entirely smooth and glossy except for base of body whorl, where there are 11 spiral ridges. Outer lip bears 4 denticles; columella smooth.

Colour creamy white with a row of arcuate brown lines on spire whorls, forming a double undulation on body whorl. Dimensions $4,4 \times 1,9$ mm (holotype).

Distribution: Known only from Réunion Is.

Type material: Holotype (Fig. 23) and a single paratype from *Marion-Dufresne* Stn. DR 47, $21^{\circ}23'S$, $55^{\circ}37'E$, 205–215 m, both empty shells; holotype MNHP, paratype NM (NM K3979/T62). Six further paratypes hand-dredged by J. Drivas in 55 m (off Boucan Canot) and one by M. Jay in 12 m (Cap la Houssaye, St. Paul).

Notes: The nearest species is *M. raphaeli* from which it differs in its basal lirae not extending as high up the body whorl, and in its colour pattern of more widely-spaced axial stripes, without any subsutural blotches.

Mitrella rorida (Reeve, 1859)

Figs 24a–b

Columbella rorida Reeve, 1859: pl. 28, sp. 176. (Type locality: Lord Hood's Island.)

Columbella pellucida Pease, 1861: 399, without figure. (Type locality: Sandwich Island [= Hawaii].)

Amycla (*Astiris*) *tessellata* Dunker, 1871: 156, without figure. (Type locality: Paumotu, Polynesia.)

Notes: Protoconch of about 3,5 whorls, bearing fine axial riblets. Body whorl peculiarly elongated with a characteristic pattern of 2 spiral rows of white blotches; brown blotches are usually obsolete. Maximum length 7 mm.

Empty shells found at a depth of 12 m off Cap la Houssaye, St. Paul. Uncommon.

A specimen resembling the type figure of *Amycla tessellata* is here illustrated (Fig. 24b).

Distribution: Mauritius and Réunion to Polynesia and Hawaii.

Mitrella russeli (Brazier, 1874)

Fig. 25

Columbella (*Mitrella*) *russeli* Brazier, 1874: 671, pl. 83, figs 17–18. (Type locality: Eclipse Island, N.E. Australia.)

Notes: Characterised by its brown blotches, on a creamy-white background. Length 6,5 mm.

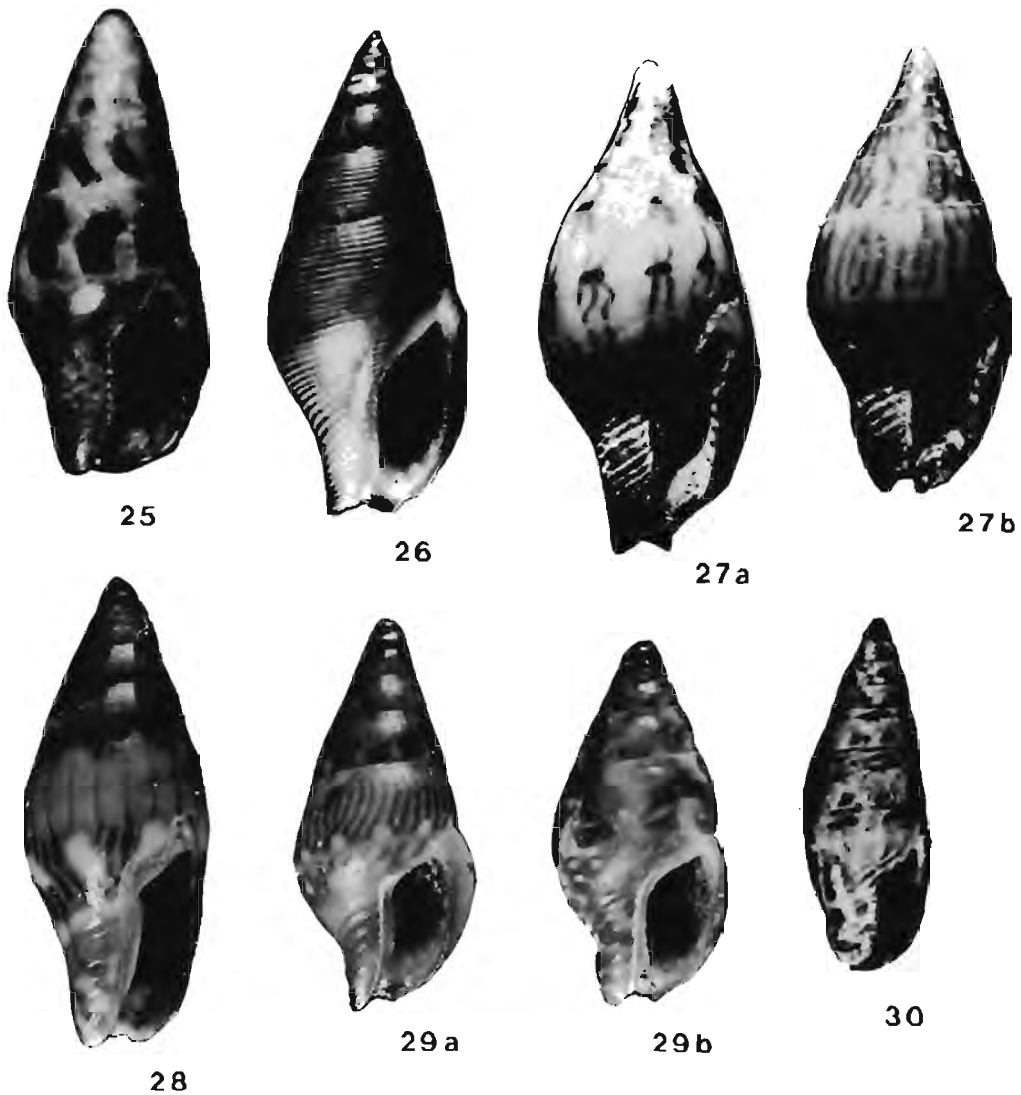
Known from Réunion from only one shell found in sand at 12 m, off Cape la Houssaye, St. Paul.

Distribution: Réunion to Queensland and Polynesia.

Mitrella suzannae sp. n.

Fig. 26

Description: Shell elongate-oval in shape; protoconch of about 2,5 finely axially ribbed whorls (like that of *Euplica* spp). Teleoconch of 5 slightly convex whorls. Entire shell with fine, closely set spiral threads (14 on penultimate whorl) and raised growth-lines (which are more distinct on early whorls, numbering about 36



Figs 25–30. *Mitrella* and *Pyreneola* species. 25, *Mitrella russelli* (Brazier, 1874), length 6,5 mm. 26, *M. suzannae* sp. n., holotype, 8,4 mm. 27a–b, *M. venulata* (Sowerby, 1894): a, length 8,7 mm, b, 8,9 mm. 28, *Pyreneola cincinnata* (von Martens, 1880), length 3,8 mm. 29a–b, *P. mascarenensis* sp. n.: a, holotype, length 4,1 mm; b, paratype, NM K3981, 3,7 mm. 30, *P. shepsionensis* (E. A. Smith, 1910), length 5,1 mm.

on 2nd whorl). Columella strongly concave, calloused, with a weak fold inside, interior of outer lip with 4 teeth. Colour is plain ochre, with paler protoconch. Dimensions: $8,4 \times 3,4$ mm (holotype); length varies from 6,3–8,4 mm.

Distribution: Known only from Réunion and Mauritius.

Type material: Holotype MNHP, *Marion-Dufresne* Stn DC 134, $20^{\circ}51'S$, $55^{\circ}39'E$, 650–750 m. Paratypes: 9, same data as holotype; 2, *Marion-Dufresne* Stn DR 62, $21^{\circ}09'S$, $55^{\circ}12'E$, 630–710 m; 9, do, Stn DC 112, $20^{\circ}53'S$, $55^{\circ}09'E$, 740–780 m; 1, do, Stn 159, $20^{\circ}59'S$, $55^{\circ}59'E$, 757–771 m; 1, do, Stn DR 63, $21^{\circ}10'S$, $55^{\circ}09'E$, 825–830 m; all empty shells in dredged sand. One paratype in NM (NM K3980/T63). Also one paratype from Mauritius, off Flic en Flac, at 55 m in hand-dredged sand, empty shell, in J. Drivas colln.

Notes: Resembles *Mitrella nomanensis* (Sturany, 1900) from the Red Sea; that species differs in its smooth protoconch of 3,5 whorls.

Etymology: Named after the village of Sainte Suzanne, on the north coast of Réunion, off which the holotype was collected.

Mitrella venulata (Sowerby, 1894)

Figs 27a–b

Columbella venulata Sowerby, 1894: 153, pl. 12, fig. 4. (Type locality: Hong Kong.)

Columbella venulata var. *interpuncta* Hervier, 1899: 343. (Type locality: Lifu, New Caledonia.)

Notes: Colour of teleoconch pale orange, with darker axial lines. This species is sympatric with *M. nympha* (Kiener, 1841), from which it differs in shape, its spire being lower and distinctly coeloconoid. Adult length varies from 8,2 to 9,8 mm. Our specimens were compared with topotypes.

Found alive on algae in 3–13 m. Rare on Réunion.

Distribution: Réunion and Madagascar to Philippines.

Genus *Pyreneola* Iredale, 1918

Type species (by monotypy) *Columbella* (*Amycla*) *abyssicola* Brazier, 1877 (Torres Straits).

Diagnosis: Shell small in size, ovate-elongate, with a rather elevated spire; surface smooth; anterior canal short and narrow; columella callus expanded posteriorly, its outer edge somewhat raised.

Pyreneola cincinnata (von Martens, 1880)

Fig. 28

Columbella cincinnata von Martens, 1880: 248, pl. 20, fig. 14. (Type locality: Mauritius.)

Notes: Protoconch of about 2,5 pinkish-violet tinted whorls. Teleoconch characterised by a colour pattern of thin, somewhat wavy, axial brown lines, interrupted by oval white blotches. Maximum length 4,2 mm.

Empty shells found from 12 to 225 m; 1 specimen alive under a stone at a depth of 12 m off Cape la Houssaye, St. Paul. Uncommon.

Differs from *Pyrene melvilli* Hedley, 1899 (syn. *Columbella subphilodicia* Hervier, 1899) in its higher spire and more slender shape.

Distribution: Réunion and Mauritius.

***Pyreneola mascarenensis* sp.n.**

Figs 29a–b

Description: Spire twice length of aperture. Protoconch of about 2,5 smooth whorls. Teleoconch of 4 slightly convex whorls. Surface smooth, except for a distinct subsutural groove and 9 spiral ridges on base of body whorl. Columella with 7 denticles, outer lip with 9 indistinct denticles. Colour cream, with wavy axial brown lines and small white blotches, which may be reduced to a row at base of spire whorls, or may be disseminated over the whole shell; protoconch and suture of early whorls tinted with violet. Dimensions: $4,1 \times 1,7$ mm; length 3,7 to 4,2 mm.

Distribution: off Réunion Island in 160–310 m, and off Mauritius in 50 m.

Type material: Holotype MNHP, *Marion-Dufresne* Stn DC 26, 21°22'S, 55°47'E, 310 m. Paratypes: 1, same data as holotype; 4, Stn DR 47, 21°23'S, 55°37'E, 205–215 m; 2, Stn DC 2, 21°12'S, 35°49'E, 160–190 m; 1, off Flic en Flac, Mauritius, 50 m; all dredged empty shells on sand. One paratype NM (NM K3981/T64).

Notes: This species differs from *Pyreneola melvilli* (Hedley, 1899) in its higher spire, and from *P. cincinnata* (von Martens, 1880) in its colour pattern, its higher spire, and the shape of its base; *P. semipicta* (Sowerby, 1894) has a wider base which lacks markings; from *P. angasi* (Brazier, 1871) *mascarenensis* differs in the shape of the base, and in possessing brown lines that do not reach the suture; finally, it can be distinguished from *P. abyssicola* (Brazier, 1877) by the shape of the base and by the colour pattern.

Etymology: named after the Mascarene Islands.

***Pyreneola shepstonensis* (Smith, 1910)**

Fig. 30

Columbella shepstonensis Smith, 1910: 193, pl. 7, fig. 6. (Type locality: Port Shepstone, South Africa).

Columbella (*Mitrella*) *moleculinella* Dautzenberg, 1932:35–36 pl 1 fig. 7. **Syn. n.** (Type locality: Cap Sainte-Marie, Madagascar).

Notes: Our specimen agrees exactly in markings with the type figure, this consisting of a spiral brown line, with a row of brown blotches on either side, on a creamy white background.

Known from Réunion by a single shell found at a depth of 47 m. MNHP topotypic material of *moleculinella* is identical with Réunion's shell; length 5,1 mm.

Distribution: Tanzania, Réunion and Madagascar to Natal.

Genus *Metanachis* Thiele, 1924

Type species (by monotypy) *Columbella jaspidea* (Sowerby, 1844)

Diagnosis: Early whorls with axial sculpture, which disappears on later whorls; upper part of columella bears a denticle.

Metanachis japix (Duclos, 1846)

Fig. 31

Colombella japix Duclos, 1846: pl. 22, figs 13–14, without description. (Type locality unknown.)

Notes: Shell of about 5,5 whorls, of which about 1,5 whorls are protoconch; colour pattern of teleoconch consisting of a mottled brown spiral band just above and under the suture, occupying middle of body whorl, on a white background.

Known locally by only one shell, found in sand from 12 m; length 8,6 mm.

Metanachis marquesa (Gaskoin, 1851)

Figs 32a–b

Pleurotoma nitida Kiener, 1840 (*non Colombella nitida* Lamarck, 1822): 66, pl. 27, fig. 4. (Type locality: Mauritius.)

Columbella taeniata Adams & Reeve, 1850 (*non* Link, 1807, nec Philippi, 1846): 34, pl. 11, fig. 19. (Type locality: Borneo.)

Columbella marquesa Gaskoin, 1851: 8, without figure. (Type locality: Marquesas Islands.)

Columbella (Amycla) decolor Gould, 1860: 336, without figure. (Type locality: Loo Choo [= Ryukyu Islands].)

Columbella (Amycla) sublaevis Montrouzier, in Souverbie & Montrouzier, 1864: 270, pl. 10, fig. 4. (Type locality: New Caledonia.)

Columbella (Mitrella) marquesa var. *taeniolata* Kobelt, 1887: 192, pl. 26, fig. 14 (*nom. n.* for *taeniata* Adams & Reeve, 1850, *non* Link, 1897).

Columbella marquesana [sic] var. *elongata* Hervier, 1899: 328. (Type locality: New Caledonia.)

Columbella sublaevis var. *cinctella* Hervier, 1899: 329. (Type locality: Lifu, New Caledonia.)

Columbella sublaevis var. *trifasciata* Hervier, 1899: 329. (Type locality: Lifu.)

Columbella marquesana var. *flammulata* Dautzenberg & Bouge, 1933: 221. (Type locality: Society Is, Papeete-Tahiti and Raiatea.)

Notes: This species is characterised by its rose-tinted early whorls, and colour pattern on later whorls of distinct brown lines and blotches on a creamy ground colour. Protoconch of 2 smooth whorls, white to violaceous-pink. Maximum length 10,4 mm.

Found as shells on beaches; one specimen found alive under a stone, 12 m deep, Cap la Houssaye, St. Paul. Uncommon. Although Sleurs (1985: 271) synonymises *marquesa* with *M. jaspidea* (Sowerby, 1844), we consider the two species to be distinct, differing constantly in the following characters: *jaspidea* is more ventricose than *marquesa*, and unlike the latter has a denticulated outer lip and columella, and also axial ribs that continue onto the body whorl. Syntypes of the two species have been figured by Kaicher (1984: cards 3783 (*jaspidea*) and 3786 (*marquesa*)). A specimen agreeing with the type figure of *Columbella taeniata* is here illustrated (Fig. 32a).

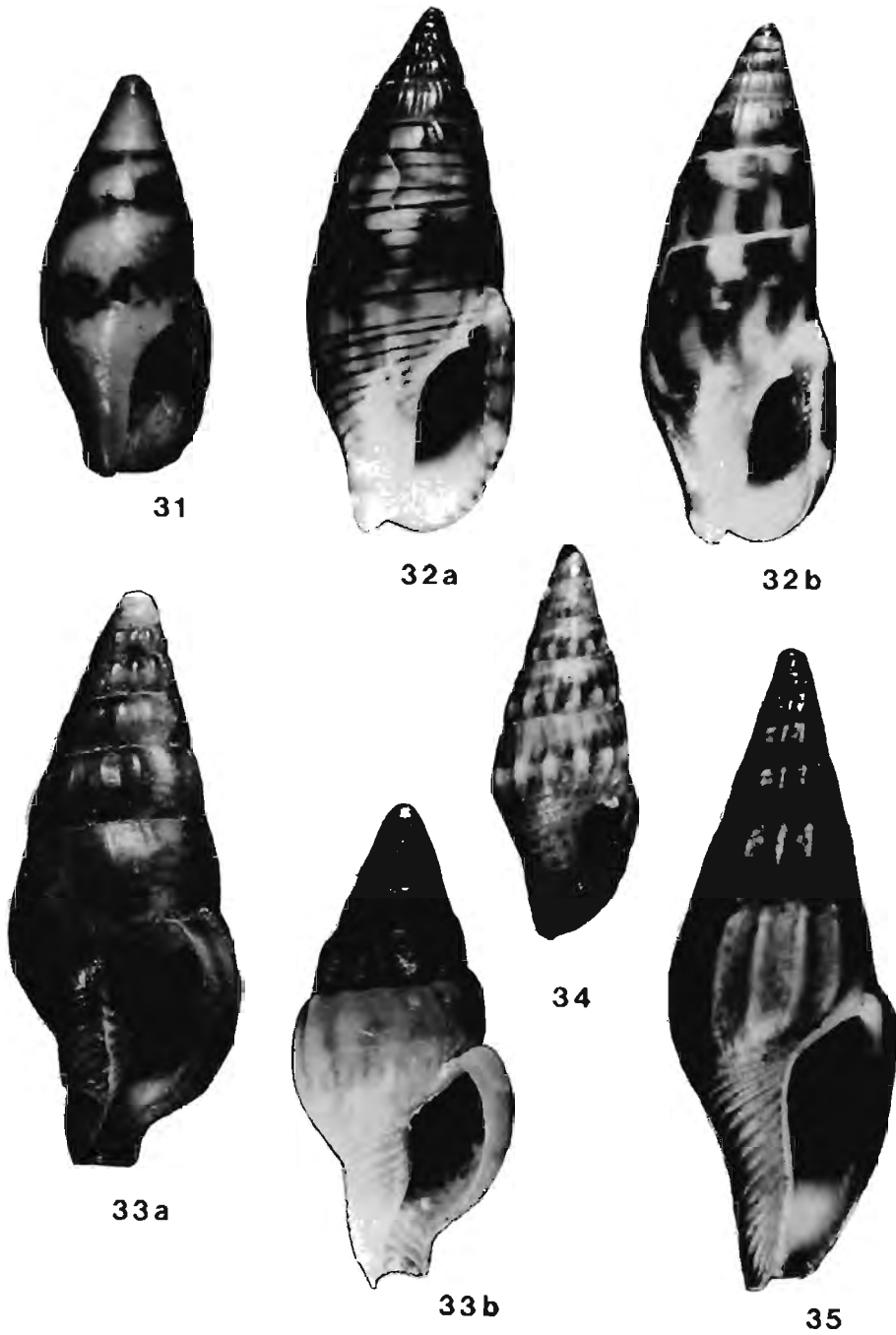
Columbella (Amycla) lineolata Gould, 1860, is a synonym of *Mitrella bicincta* (Gould, 1860), and not of *M. marquesa* as stated by Tryon (1883: 136).

Distribution: Widespread in the Indo-West Pacific.

Genus *Indomitrella* Oostingh, 1940

Type species (by original designation) *Columbella puella* Sowerby, 1844.

Diagnosis: Shell with axial sculpture and smooth intervals.



Figs 31–35, *Metanachis* and *Indomitrella* species. 31, *Metanachis japix* (Duclos, 1846), length 8,6 mm. 32a–b, *M. marquesa* (Gaskoin, 1851): a, length 9,9 mm; b, length 10,2 mm. 33a–b, *Indomitrella antelmi* (Viader, 1938): a, length 6,7 mm; b, length 5,7 mm. 34, *I. kilburni* sp. n., holotype, length 4,7 mm. 35, *I. haziersiensis* sp. n., length 10,5 mm.

Indomitrella antelmei (Viader, 1938)

Figs 33a–b

Pyrene antelmei Viader, 1938: 4, pl. 1, figs 1–6. (Type locality: Savinia, Mauritius.)

Notes: Protoconch of about 1,5–2 smooth whorls. Teleoconch with more or less well-developed axial ribs that may cover the whole shell or conversely be restricted to the first whorl, but are most often present on first 3–4 whorls; colour pattern on fresh specimens consists of a subsutural row of cloudy dark brown blotches, a spiral row of white blotches around the middle of the last whorl, ending in a brown blotch on outer lip. Some specimens are very pale brown, and worn specimens may be colourless. Adult length 5,0–6,9 mm.

Empty shells found at depths of 75–450 m. Common.

Distribution: Réunion and Mauritius.

Indomitrella haziensis sp. n.

Fig. 35

Description: Shell fusiform in shape, spire slightly higher than aperture. Protoconch of 2 smooth whorls. Teleoconch of 6 slightly convex whorls. Sculptured by smooth and rounded axial ribs, which number 14 on last whorl; a weak subsutural groove and 16 spiral ridges on base, reaching level of top of columella; under magnification, very fine axial riblets are seen in their interstices. Outer lip slightly expanded, lirate inside. Colour uniform cream. Dimensions: $11,4 \times 3,7$ mm (holotype); length varies from 10,3 to 11,6 mm.

Distribution: Known only from Réunion.

Type material: Holotype MNHP, *Marion-Dufresne* Stn DS 131, 20°51'S, 55°37'E, 345–375 m, off Pointe des Haziens, off the north coast of Réunion. Paratypes, 3, Stn DC 128, 20°51'S, 55°36'E, 280–340 m. All empty shells in sand. One paratype NM (NM K3982/T65), one paratype Drivas colln.

Notes: No other species appears to be comparable on account of its sculpture.

Etymology: named after the type locality 'Pointe des Haziens'.

Indomitrella kilburni sp. n.

Fig. 34

Description: Shell fusiform in shape, spire 1,5 times height of aperture. Protoconch of about 2,5 smooth whorls; teleoconch of 5 slightly convex whorls. Sculptured by axial ribs, which number 13 on last whorl; 11 spiral cords on base, reaching level of top of aperture; a weak subsutural groove. Columella smooth; outer lip thin and smooth inside, with a sulcus posteriorly, turrid-like. Cream coloured, with fine brown axial lines, and a spiral row of white blotches around the periphery of whorls; basal lirae dotted with brown. Protoconch is violet tinted. Dimensions: $4,7 \times 1,7$ mm (holotype); length varies from 4 to 5 mm.

Distribution: Known only from Réunion.

Type material: Holotype MNHP, from off Boucan Canot, St Gilles, 45 m, collected by J. Drivas. PARATYPES (*Marion-Dufresne* expedition): Stn 85, 21°00'S, 55°15'E, 58–70 m (3); Stn DC 124, 20°52'S, 55°7'E, 40 m (2); Stn DC 41, 21°1'S, 55°27'E, 75 m (4); Stn DC2, 21°12'S, 55°49'E, 160–190 m (2); Stn DC 176, 21°02'S, 55°11'E, 165–195 m (1); Stn C 56, 21°05'S, 55°12'E, 170–225 m (10); Stn DR 47, 21°23'S, 55°37'E, 205–215 m (14); Stn DC3, 21°13'S, 55°50'E, 300 m (1); Stn DR 50, 21°24'S, 55°38'E, 800–825 m (1). All empty shells. Two paratypes from Cap la Houssaye, Saint Paul, 12 m, collected J. Drivas, are in NM (NM K3974/T57). Twenty paratypes each in the respective collns of Drivas and Jay.

Notes: Empty shells of this species are commonly found in hand-dredged sand from 10 to 110 m, along the entire west coast of Réunion; there are more than 150 specimens in the authors' collns.

Etymology: This species is named in honour of Richard Kilburn, of the Natal Museum.

Genus *Zafra* A. Adams, 1860

Type species (by monotypy) *Zafra mitriformis* A. Adams, 1860 (Japan).

Diagnosis: Shell small, with axial ribs and no spiral sculpture except for basal cords.

Zafra alternata (Gould, 1860)

Fig. 36

Columbella (*Anachis*) *alternata* Gould, 1860: 335, without figure. (Type locality: Hong Kong.)
Zafra alternata; Kaicher, 1984: card 3864 (lectotype).

Notes: Protoconch of about 1,5 smooth whorls. The shell is characterised by a spiral row of brown blotches on a white background. Lacks the subsutural groove found in *Z. cinnamomea*.

Known on Réunion by 2 empty shells found in sand at a depth of 65 m; length 2,2 and 2,5 mm.

Distribution: China to Réunion and Mauritius.

Zafra atrata (Gould, 1860)

Fig. 37

Columbella (*Anachis*) *atrata* Gould, 1860: 334, without figure. (Type locality: Hong-Kong).
Zafra atrata; Kaicher, 1984: card 4226 (Lectotype).

Notes: Protoconch of 3 smooth whorls; adult shell with a subsutural groove, 20 axial ribs and 8 basal lirae on body whorl, colour dark brown. Length 4,7 mm.

Known on Réunion by 2 empty shells, found in hand-dredged sand from 70 m.

Distribution: Queensland and Japan to Réunion and Natal.

Zafra cinnamomea (Hervier, 1899)

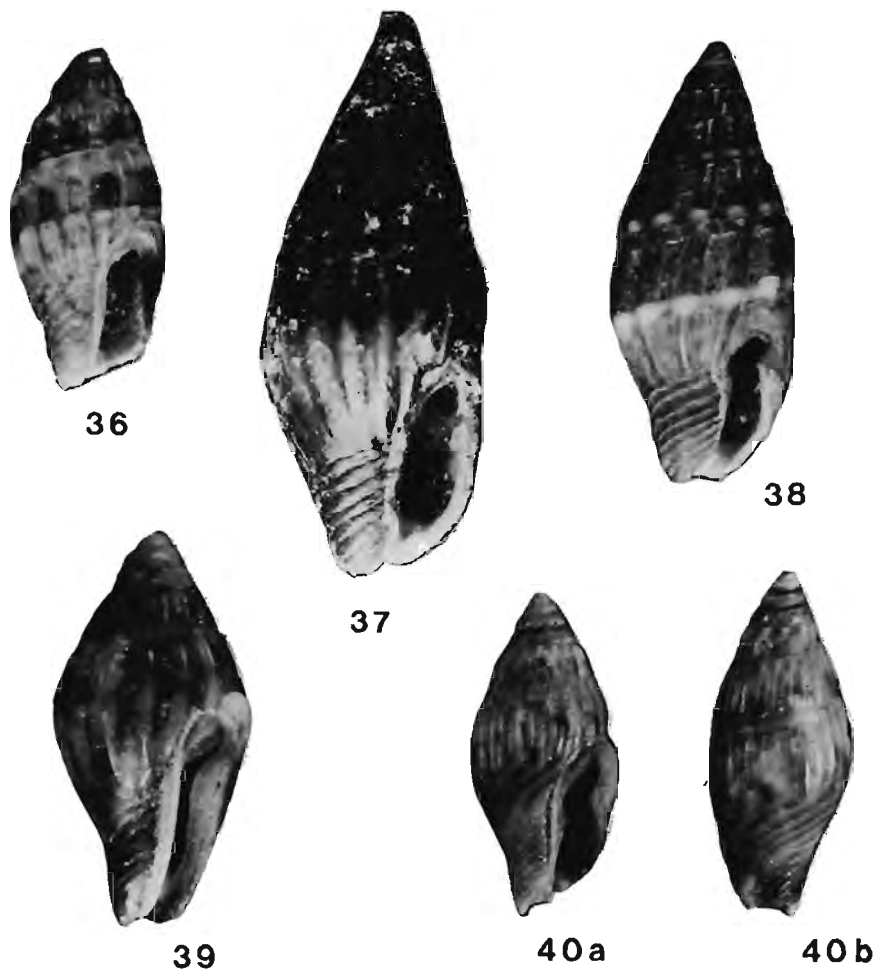
Fig. 38

Columbella peasei var. *cinnamomea* Hervier, 1899: 368, pl. 14, fig. 9 (Type locality: Lifu, New Caledonia.)

Columbella hervieri Pace, 1902: 420. (nom. n. for *peasei* Hervier, 1899, non von Martens & Langkavel, 1871.)

Notes: Protoconch of about 1,5–3 smooth whorls. Pale brown with one white spiral line at periphery (not always present). Length varies from 2,8 to 4,0 mm.

This species differs from *Columbella peasei* von Martens & Langkavel, 1871, in its slightly different shape and shorter aperture, and the absence of spiral sculpture except for basal lirae. Réunion shells are identical to topotypes of the taxon Hervier described as *C. peasei* var. *cinnamomea*. It differs from *Columbella*



Figs 36–40. *Zafra* species. 36, *Z. alternata* (Gould, 1860), length 2,3 mm. 37, *Z. atrata* (Gould, 1860), length 4,7 mm. 38, *Z. cinnamomea* (Hervier, 1899), length 3,2 mm. 39, *Z. comistea* (Melvill, 1906), length 2,5 mm. 40a–b, *Z. kaicherae* sp. n.: a, paratype NM K3975, length 2,5 mm; b, holotype, length 2,7 mm.

(*Seminella*) *melitoma* Melvill & Standen, 1901 (Karachi) in the absence of denticles inside the outer lip.

Empty shells found at depths of 12 to 215 m; also one specimen from 900 m (*Marion-Dufresne* expedition). Common.

Distribution: New Caledonia to Réunion.

Zafra comistea (Melvill, 1906)

Fig. 39

Columbella (*Seminella*) *comistea* Melvill, 1906: 75, pl. 7, fig. 16. (Type locality: Persian Gulf.)
Zafra comistea; Kaicher, 1985: card 4204 (syntype).

Notes: Protoconch of 3 smooth whorls. Teleoconch with 15–16 axial ribs on upper half of body whorl, obsolete on base, where there are a few spiral lirae; a subsutural groove is present. Creamy white background with irregular slightly darker blotches. Our specimens were compared with topotypes. Adult length varies from 2,3 to 2,9 mm.

Empty shells found at depths of 12 to 270 m; one from 800–825 m (*Marion-Dufresne* expedition). Common.

Distribution: Persian Gulf to Réunion.

Zafra kaicherae n. sp.

Figs 40a–b

Description: Shell minute (2,4–3,0 mm); ovate-fusiform, aperture equal in length to spire, base slightly recurved. Protoconch of about 3,5 smooth whorls. Teleoconch of 3 slightly convex whorls. Sculptured by low axial ribs, 19 on last whorl, incised below suture by a shallow groove; base bears 7 spiral lirae. Columella calloused in adult, with 2 denticles; inside of outer lip smooth, but with a somewhat angular swelling posteriorly. Colour creamy white, with distinct axial brown lines, that are strongly oblique on base, but change in the middle of body whorl into brown vertical blotches, or into an undulating pattern; columella tinted in a similar shade of brown. Protoconch bears a spiral brown line.

Dimensions: 2,7 × 1,1 mm (holotype).

Distribution: Known only from off Réunion Island in about 54–215 m.

Type material: Holotype MNHP, *Marion-Dufresne* expedition, Stn DC 54, 21°06'S, 55°12'E, 80–83 m. Paratypes in MNHP: same data as holotype (1); Stn CP 43, 21°21'S, 55°27'E, 73–77 m (1); Stn CP 174, 20°52'S, 55°37'E, 78–85 m (2); Stn FA 25, 21°22'S, 55°46'E, 90–95 m (3); Stn CP 127, 20°52'S, 55°37'E, 92 m (7); Stn CP 172, 20°52'S, 55°38'E, 110 m (1); Stn DR 21°23'S, 55°37'E, 205–215 m (1); Stn DC 10, 21°13'S, 55°52'E, 930–980 m (2); all empty shells in dredged sand. One paratype NM (NM K3975/T58). Also 10 paratypes from hand-dredged sand at depths of 54–90 m in colln Drivas, and a further 10 in colln Jay.

Notes: *Z. kaicherae* differs from its nearest allies, *Columbella* (*Seminella*) *salutaris* Melvill, 1910, from Bombay, and *Columbella* (*Seminella*) *phaula* Melvill & Standen, 1901, from Karachi, in its subsutural tubercles and in its colour pattern.

Etymology: Named in honour of Mrs Sally Diana Kaicher.

Zafra morini (Viader, 1938)

Fig. 41

Pyrene morini Viader, 1938: 4, pl. 2, figs 15–16. (Type species: Mauritius; Chagos).

Notes: Protoconch of about 2,5–3 smooth whorls. Teleoconch most variable in colour pattern, with a spiral row of white blotches subsuturally, and under this a greyish brown zone with darker axial wavy lines. Adult length 2,8–3,0 mm.

Found alive in the entrance to the harbour, under stones, 1 to 3 m deep. Common.

Distribution: Réunion and Mauritius.

Zafra ocellatula (Hervier, 1899)

Fig. 42

Columbella ocellatula Hervier, 1899: 367, pl. 13, fig. 11. (Type locality: Lifu, New Caledonia.)

Notes: Protoconch of 3 smooth whorls. Teleoconch with about 12 axial ribs on body whorl, a subsutural groove, and 7–10 basal lirae. Middle of body whorl and lower part of spire whorls brown, with conspicuous white spots, base of body whorl and subsutural region white. Length varies from 3,7 to 5,8 mm.

Empty shells found at 12 to 70 m deep; common. One from *Marion-Dufresne* dredgings, 150–160 m.

Distribution: New Caledonia to Mauritius and Réunion.

Zafra regulus (Souverbie, 1864)

Figs 44a–b

Columbella pumila Souverbie, in Souverbie & Montrouzier, 1863 (*non* Dunker, 1860): 281, pl. 12, fig. 4. (Type locality: New Caledonia.)*Columbella regulus* Souverbie, in Souverbie & Montrouzier, 1864: 41. (**nom. n.**)*Columbella (Anachis) gowllandi* Brazier, 1874: 671, pl. 83, figs 15–16. (Type locality: Eclipse Island, N. E. Australia.)

Notes: Protoconch of 3 smooth whorls. Uniform dark brown in colour. Length 3,8 mm.

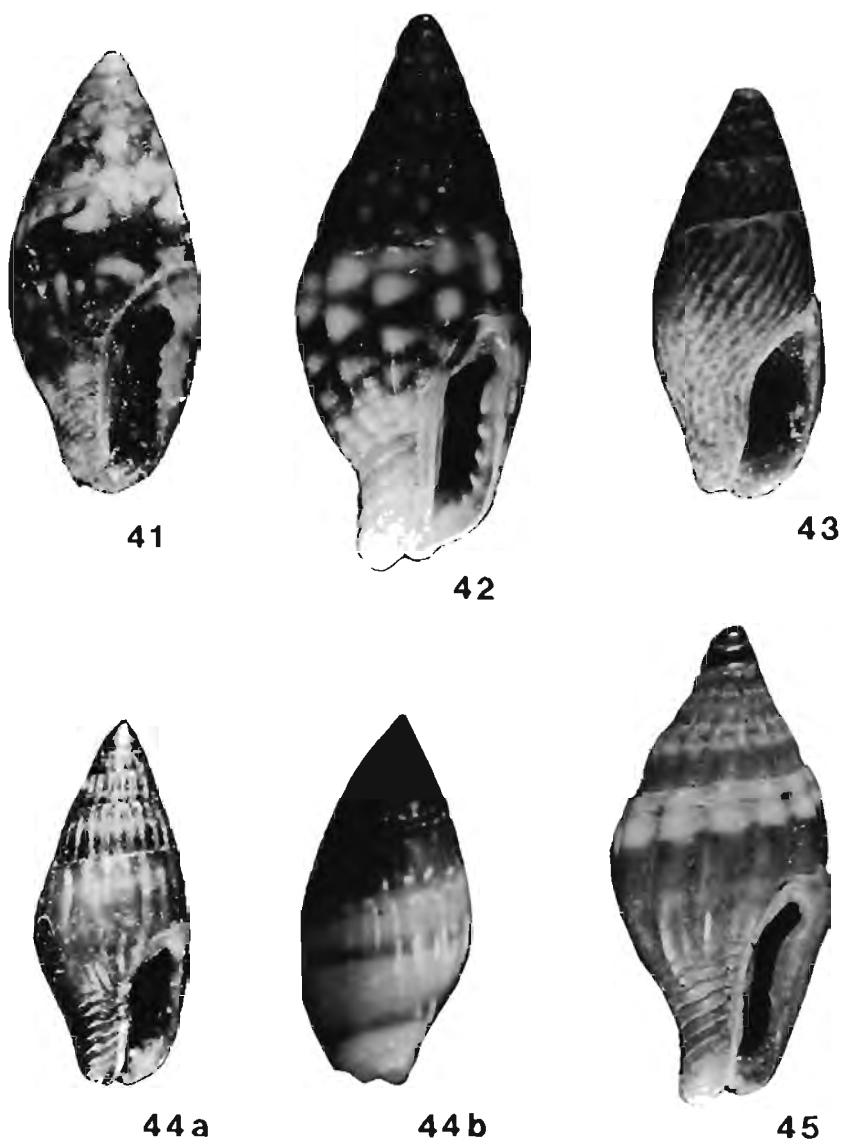
Our specimens were compared with topotypes of *C. regulus* Souverbie, 1864, and found to be identical. This species differs from *Z. atrata* (Gould 1860), only in its slightly less narrow shape. We suspect that the two could prove to be synonyms, but do not have enough material to decide. Sleurs (1987: 37) treats *regulus* as a synonym of *Zafra minuscula* (Gould, 1860); we are unable to decide if he is correct. *C. gowllandi* synonymised by Sleurs, was compared with specimens from Polynesia; intermediates were found which possess a brown apex but a last whorl that is creamy white with 2 brown spiral lines (Fig. 44b). Known from Réunion from 3 specimens, found as empty shells at depths of 12–70 m.

Distribution: Polynesia to Mauritius and Réunion.

Zafra succinea (Hervier, 1899)

Fig. 45

Columbella succinea Hervier, 1899: 375–375, pl. 14, fig. 5. (Type locality: Lifu, New Caledonia.)



Figs 41–45. *Zafra* and *Murella* species. 41, *Zafra morini* (Viader, 1938), length 2,0 mm. 42, *Z. ocellatula* (Hervier, 1899), length 4,5 mm. 43, *Murella regnardi* (Viader, 1938), length 1,2 mm. 44a–b, *Zafra regulus* (Souverbie, 1864): a, length 3,8 mm; b, length 3,7 mm. 45, *Z. succinea* (Hervier, 1899), length 3,2 mm.

Notes: Protoconch of 3 smooth whorls. Teleoconch with 14 axial ribs on body whorl, spiral sculpture consisting of 10 basal lirae and a shallow subsutural groove. Pale brown in colour, upper part of each whorl white; brown area on body-whorl often delimited posteriorly by a darker line, but anteriorly it becomes paler towards the base. Length varies from 2,9 to 3,2 mm. Our specimens were compared with topotypes.

Always found as empty shells in hand-dredged sand from 12–90 m, apart from one specimen from 460–490 m and 2 from 930–980 m (*Marion-Dufresne* dredgings). Uncommon.

Although Sleurs (1987) considers *C. succinea* a synonym of *C. troglodytes* Souverbie & Montrouzier, 1866, the former species is more biconical, with a different coloration, and its protoconch is not carinated as in *troglodytes*.

Distribution: New Caledonia to Réunion and Mauritius.

Genus *Seminella* Pease, 1868

Type species (s.d. Iredale, 1916): *Cythara varia* Pease, 1860 (*non* Sowerby, 1832) [= *Columbella peasei* von Martens & Langkavel, 1871].

Diagnosis: Shell small, bearing axial ribs and fine spiral sculpture; denticles inside outer lip.

Seminella savinae (Viader, 1951)

Fig. 46

Pyrene savinae Viader, 1951: 147, pl. 4, fig. 16. (Type locality: Savinia, Mauritius.)

Notes: Protoconch of 3 smooth whorls; teleoconch with a subsutural groove, and spiral cords that override the axial ribs on the base of the last whorl, but appear only in the rib intervals on the upper part. Colour pattern of brown lines encircling oval whitish blotches all over the shell. A spiral band on middle of body whorl is paler to whitish, but not always present. Length varies from 2,2 to 3 mm.

Empty shells found in hand-dredged sand from 12–90 m, and sometimes living under stones at 12 m; also dredged in 90–215 m by *Marion-Dufresne* expedition; 1 empty shell in 800–825 m. Common on Réunion.

Distribution: Mauritius and Réunion.

Seminella peasei (von Martens & Langkavel, 1871)

Figs 47a–h

Cythara varia Pease, 1860 (*non* Sowerby, 1832): 147, not figured. (Type locality: Sandwich Islands [= Hawaii].)

Columbella nana Dunker, 1871 (*non* Duclos, 1840): 157, without figure. (Type locality: Viti Island.)

Columbella (Seminella) peasei Von Martens & Langkavel, 1871: 23, pl. 1, fig. 17 [nom. n. for *varia* Pease, 1860, *non* Sowerby, 1932].

Zafra purpurea H. Adams, 1873: 206, pl. 23, fig. 3. (Type locality: New Hebrides.)

Columbella nanisca Hervier, 1899: 363, pl. 13, figs. 8–10. (Type locality: Lifu, New Caledonia.)

Columbella nanisca var. *subobscura* Hervier, 1899: 363, pl. 13, fig. 9. (Type locality: Lifu, New Caledonia.)

Columbella nanisca var. *hyacintha* Hervier, 1899: 363, fig. 10. (Type locality: Lifu, New Caledonia.)

Columbella nanisca var. *zebriolata* Hervier, 1899: 365, pl. 13, fig. 8. (Type locality: Lifu, New Caledonia.)

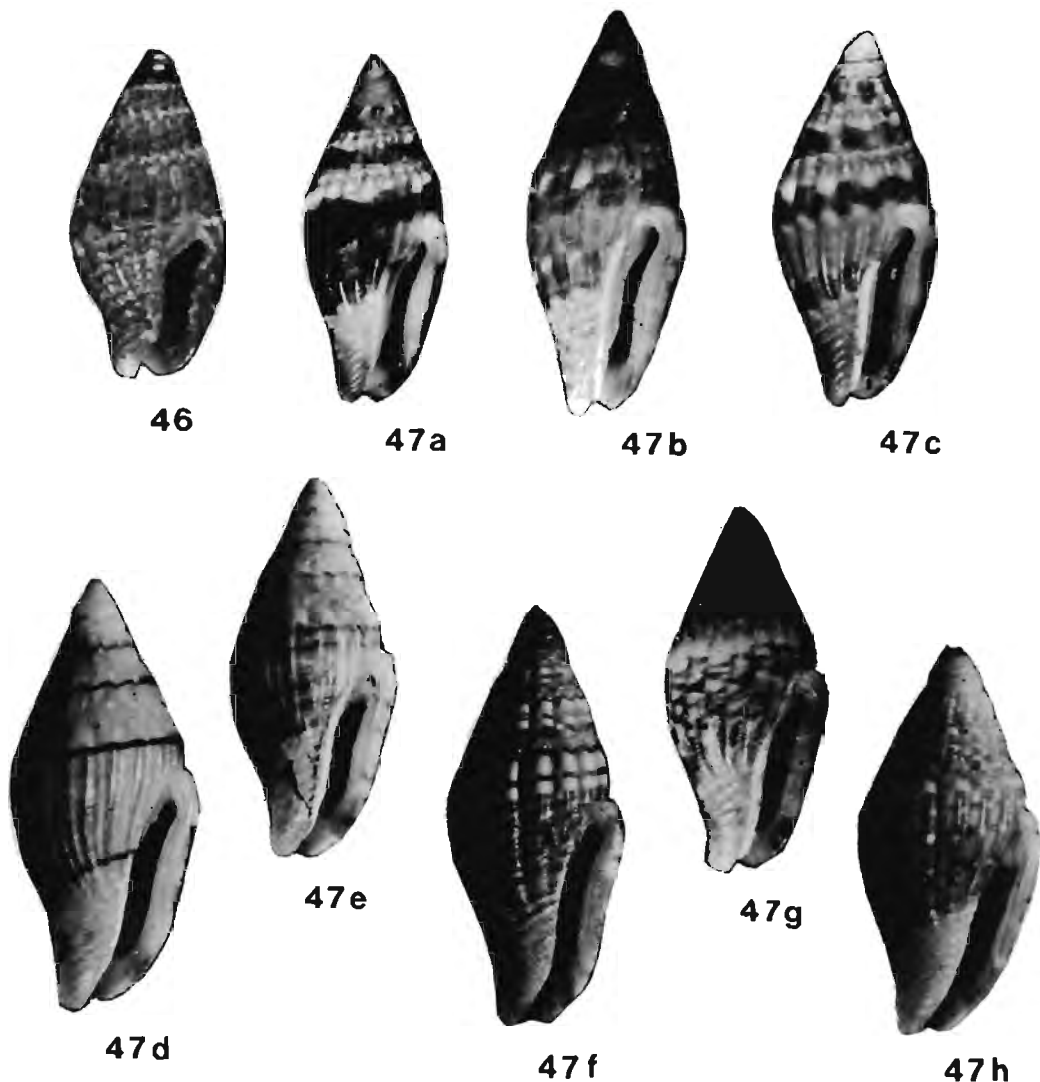
Columbella nanisca var. *violacea* Hervier, 1899: 366. (Type locality: Lifu, New Caledonia.)

Columbella nanisca var. *respersa* Hervier, 1899: 367. (Type locality: Lifu, New Caledonia.)

Columbella nanisca var. *diastata* Hervier, 1899: 366. (Type locality: Lifu, New Caledonia.)

Columbella roseotincta Hervier, 1899: 373, pl. 13, fig. 12. *Syn. n.* (Type locality: Lifu, New Caledonia.)

Notes: Protoconch of about 3,5 whorls, the last three of which bear a median spiral cord. Teleoconch with fine spiral lirae in intervals between ribs. Colour variations are many, ranging from specimens bearing a wide dark brown spiral zone or 1–7 brown spiral lines on the last whorl, to others that are plain white or



Figs 46–47. *Seminella* species. 46, *S. savinae* (Viader, 1951), neotype, length 2,7 mm. 47a–h, *S. peasei* (von Martens & Langkavel, 1871): a, length 3,5 mm; b, 3,7 mm; c, 3,7 mm; d–e, 3,7 mm; f, 3,7 mm; g–h, 3,7 mm.

pinkish-white (e.g. the types of *C. roseotincta*). Protoconch may be amber-coloured. Adult length varies from 3,4 to 4,3 mm.

Empty shells found in hand-dredged sand from 12–60 m, and alive under stones at 12 m. Common.

Our specimens were compared with topotypes from New Caledonia. Specimens agreeing with the type descriptions and/or figures of Hervier's 'varieties' *diastata*, *hyacintha*, *zebriolata* and *violacea* are here illustrated (Figs 47e, c, d, and f respectively). *Zafra purpurea* H. Adams, 1873, must be considered conspecific (W. Sleurs in lit. to J. Drivas). *S. peasei* differs from *Z. virginea* (Gould, 1860, *non* Duclos, 1840) in its protoconch, which in *virginea* consists of 2,5 smooth whorls.

Distribution: Japan and Hawaii to Réunion and Natal.

Genus *Ascalista* gen. n.

Type species: *Zafra polita* G. & H. Nevill, 1875 (Mauritius).

Diagnosis: Shell small, biconical in shape, with a smooth protoconch; distinguished from *Zafra* and *Seminella* by the absence of any spiral or axial sculpture, except for basal lirae, and from *Mitrella* in the absence of teeth on the outer lip and columella, and in its narrow aperture.

Ascalista parvula (Viader, 1951) **comb. n.**

Fig. 48

Pyrene parvula Viader, 1951: 146, pl. 4, fig. 12. (Type locality: Savinia, Mauritius).

Pyrene perparvula Viader, 1951: 146, pl. 4, fig. 17. **Syn. n.** (Type locality: Mauritius.)

Notes: Shell smooth, except for axial growth lines and 0 basal lirae (visible only under high magnification). The brown axial lines, on a light brown ground, are variable in width, even on the same shell; some of them may even be bifurcate. Therefore it is not possible to distinguish two species (as did Viader) on the grounds of the brown lines being less numerous or 'larger and wider'. Protoconch of 1,5 smooth, dark brown whorls. Length varies from 2,6 to 3,5 m.

Empty shells found in hand-dredged sand from 12 to 70 m. Rare.

Distribution: Réunion and Mauritius.

Ascalista polita (G. & H. Nevill, 1875)

Fig. 49

Zafra polita G. & H. Nevill, 1875: 97, pl. 8, fig. 5. (Type locality: Mauritius.)

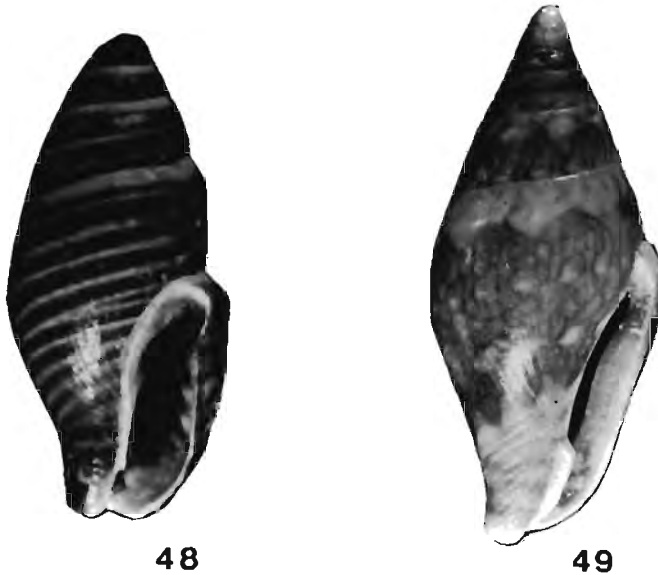
Columbella (*Astyris*) *laeta* Brazier, 1877: 232, without figure. **Syn. n.** (Type locality: Darnley Island, Torres Straits.)

Columbella dautzenbergi Hervier, 1899: 377, pl. 14, fig. 7. **Syn. n.** (Type locality: Lifu, New Caledonia.)

Columbella dautzenbergi var. *egena* Hervier, 1899: 379. (Type locality: Lifu, New Caledonia.)

Columbella dautzenbergi var. *taeniolata* Hervier, 1899 (*non* Kobelt, 1895): 379. (Type locality: Lifu, New Caledonia.)

Notes: Protoconch of 2–3 smooth whorls. Teleoconch with a variable colour-pattern of whitish dots and blotches on a whitish to brown background; a narrow whitish band on shoulder and base. Adult length varies from 3,5 to 4,5 mm.



Figs 48–49, *Ascalista* species. 48, *A. parvula* (Viader, 1951), length 3,1 mm. 49, *A. polita* (G. & H. Nevill, 1875), length 3,9 mm.

Topotypes of *C. dautzenbergi* are identical to our specimens, which also agree with the probable syntype of *C. laeta* figured by Kaicher (1984: card No. 3873).

Empty shells found in hand-dredged sand from 12 to 60 m. Also 2 empty shells from 930–980 m (*Marion-Dufresne* expedition). Common.

Distribution: New Caledonia and Torres Straits to Réunion and Mauritius.

Genus *Zafrona* Iredale, 1916

Type species (o.d.) *Colombella isomella* Duclos, 1840. (Type locality unknown.)

Diagnosis: Shell with a large, smooth protoconch; teleoconch sculptured with axial ribs crossed by spiral cords; outer lip and columella denticulate.

Notes: Sleurs (1987) regards *Colombella isomella* as a *nomen dubium* and uses the name *Columbella nebulosa* Gould, 1860, in its stead. We disagree that Duclos' illustration is inadequate for recognition, and follow previous authors in accepting the name as applicable to the species discussed below.

Zafrona isomella (Duclos, 1840)

Figs 50a–d

Colombella isomella Duclos, 1840: pl. 9, figs 7–8, without description. (Type locality unknown.)

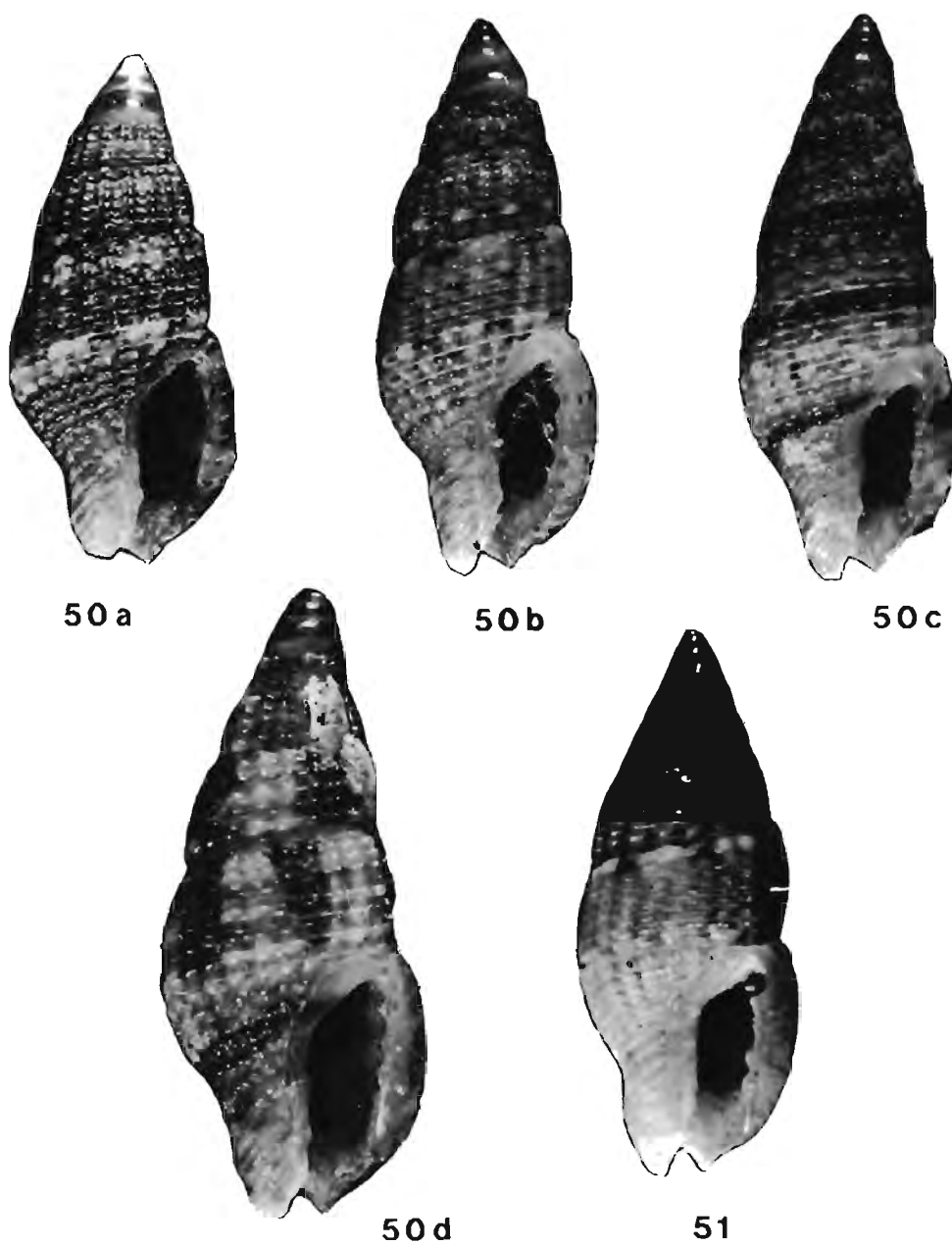
Columbella isomella var. *notata* Hervier, 1899: 362. (Type locality: Lifu, New Caledonia.)

Columbella isomella var. *transversa* Hervier, 1899: 361. (Type locality: Lifu, New Caledonia.)

Columbella isomella var. *subfelina* Hervier, 1899: 361. (Type locality: Lifu, New Caledonia.)

Pyrene retiaria Tomlin, 1931: 436, pl. 33, fig. 7. Syn. n. (Type locality: Port Shepstone, South Africa.)

Notes: Protoconch of 4–4,5 smooth whorls. Spiral cords on teleoconch are thickened where they cross the axial ribs. Colour pattern variable. Most of the 600



Figs 50–51, *Zafrona* species. 50a–d, *Z. isomella* (Duclos, 1840): a, neotype, length 4,9 mm; b, 4,7 mm; c, 4,4 mm; d, 4,6 mm. 51, *Z. striatula* (Dunker, 1871), 6,7 mm.

specimens that have been examined are dirty creamy white with a paler spiral band at mid-body whorl, but other specimens are dark brown, or creamy white bearing quadrangular brown blotches, or creamy white with dark brown streaks on the blotches, or creamy white with continuous brown spiral lines (typical of *P. retiaria*). Adult length varies from 4,1 to 5,1 mm. Empty shells found at every depth from 12 m to 225 m and alive under stones at 12 m. Common on Réunion.

Duclos' type material of this species being lost, a neotype (Fig. 50a) is designated, and deposited in MNHP; dimensions $4,9 \times 2,0$ mm, off Cap la Houssaye, Saint Paul, Réunion, 12 m, in hand-dredged sand.

Distribution: Tropical Indo-West Pacific to Réunion and Natal.

Zafrona striatula (Dunker, 1871)

Fig. 51

Amycla (*Astyris*) *striatula* Dunker, 1871: 155, without fig. (Type locality: Viti Island.)
Columbella striatula var. *sulphurea* Hervier, 1899: 363. (Type locality: Lifu, New Caledonia.)
Columbella striatula var. *rubicunda* Hervier, 1899: 363. (Type locality: Lifu, New Caledonia.)
Columbella striatula var. *subcarnea* Hervier, 1899: 363. (Type locality: Lifu, New Caledonia.)
Columbella striatula var. *lineolata* Hervier 1899: 363. (Type locality: Lifu, New Caledonia.)
Columbella striatula var. *immaculata* Hervier, 1899: 363. (Type locality: Lifu, New Caledonia.)
Zafrona consobrinella Rehder, 1980: 76, pl. 9, figs 12–13. **Syn. n.** (Type locality: Easter Island.)

Notes: Protoconch of 3,5–4 smooth whorls. Teleoconch with a rather wide and tuberculate subsutural cord. Colour creamy white, with small yellowish-brown flammules and obsolete spiral brown lines (2 in number on spire whorls and 4 on body whorl); subsutural cord with elongate brown and whitish blotches. Adult length varies from 6 to 7,7 mm.

Only 5 specimens have been found on Réunion so far, all empty shells in hand-dredged sand from 12 m.

Z. striatula closely resembles *Z. isomella* (the two are tentatively synonymised by Sleurs (1987)) but is larger and more ventricose than the latter species and has a smaller protoconch (basal diameter 0,4 mm, against 0,6 mm in *isomella*), which is never brown-tinted.

Réunion specimens appear to be indistinguishable from examples of Hervier's 'varieties' of *Z. striatula* from New Caledonia, and from specimens of *Z. consobrinella* from Easter Island.

Genus *Aesopus* Gould, 1860

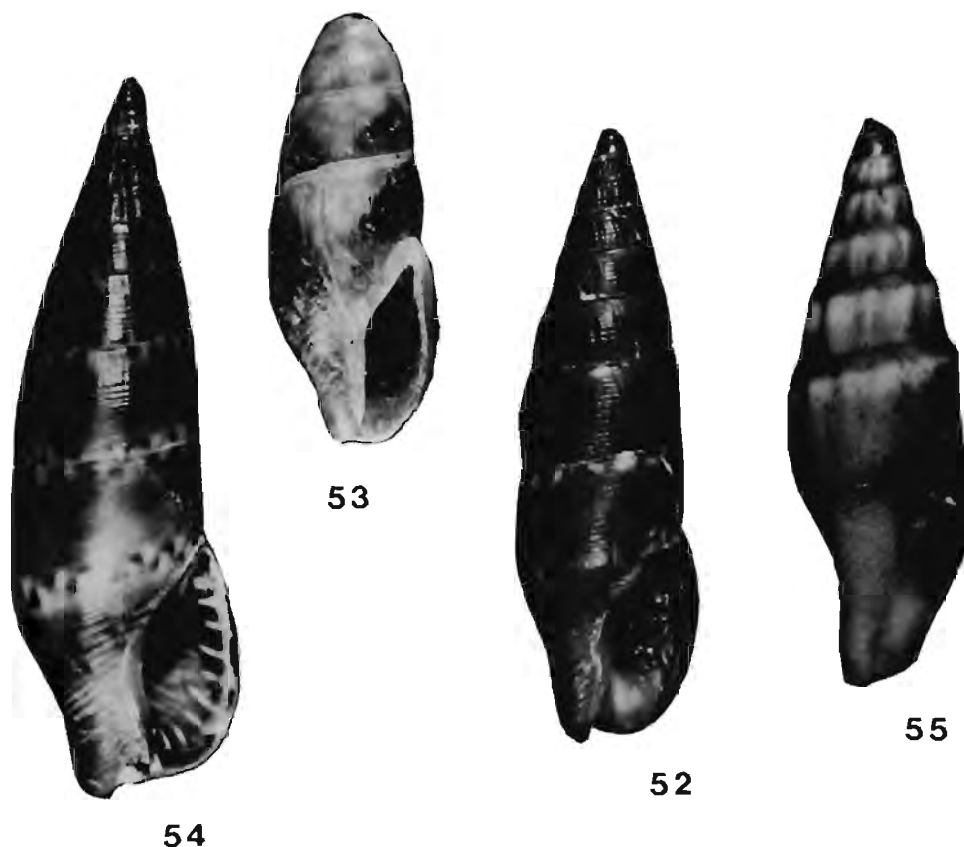
Type species (by monotypy) *Aesopus japonicus* Gould, 1860 (Japan).

Diagnosis: Characterised by the elevated spire, slender shape and the low, bulbous protoconch.

Aesopus clausiliformis (Kiener, 1834)

Fig. 52

Buccinum clausiliforme Kiener, 1834: 49, pl. 13, figs 46–48. (Type locality: Mediterranean Sea, 'côtes de Provence et les îles d'Hières' [erroneous, = Réunion Island, here emended].)
Columbella clausiliformis; Viader, 1937: 27.
Columbella clausilia Duclos in Chenu, 1846: pl. 16, figs 11–12, without description. **Syn. n.** (Type locality unknown.)
Columbella cumingi (non Reeve, 1859); von Martens, 1880: 248, pl. 20, fig. 11.



Figs 52–55. *Aesopus* and *Parviterebra* species. 52, *Aesopus clausiliformis* (Kiener, 1834), length 10,8 mm. 53, *A. rotundus* sp. n., holotype, length 3,2 mm. 54, *A. spiculus* (Duclos, 1846), length 15,7 mm. 55, *Parviterebra turiformis* sp. n., holotype, length 7,8 mm

Notes: Protoconch of 2 smooth whorls. Colour of teleoconch orange-brown, with whitish blotches in a subsutural spiral row. Maximum length 11,7 mm. *A. clausiliformis* differs from *A. spiculus* (Duclos, 1846) in its deeper spiral sculpture, orange colour and larger protoconch.

Known on Réunion from 4 empty shells found in sand from 50–60 m off Boucan-Canot.

Distribution: Réunion and Mauritius.

***Aesopus rotundus* sp. n.**

(Fig. 53)

Description: Shell subcylindrical in shape, with a strongly rounded and swollen apex; protoconch of 1,5 smooth whorls. Teleoconch of 3 convex whorls; whorls smooth, apart from a distinct subsutural groove and about 12 spiral striae on base of body whorl, the latter showing under high magnification very fine, closely set axial riblets in their intervals. Colour translucent creamy white. Columella cal-

loused, slightly concave, and smooth; outer lip smooth inside. Dimensions: $3,2 \times 1,1$ mm (holotype).

Type material: Holotype MNHP, a shell found in hand-dredged sand from 50 m off Boucan-Canot, St Gilles, Réunion Island by J. Drivas. A juvenile paratype from the same locality is in the NM (NM K3976/T59).

Notes: No other member of the genus *Aesopus* is comparable to this species, for it bears no spiral sculpture except on its base.

Etymology: The name *rotundus* refers to the shape of its apex.

Aesopus spiculus (Duclos, 1846)

Fig. 54

Colombella spicula Duclos in Chenu, 1846: pl. 16, figs 9–10, without description. (Type locality unknown.)

Columbella cumingi Reeve, 1859: pl. 25, sp. 156a–b. (Type locality: Capul Island, Philippines.)

Notes: Protoconch of about 1,5 smooth whorls. Colour violet-pink, with a spiral row of quadrangular darker and lighter blotches above and below suture. Maximum length 16,2 mm.

Shells found on beaches, rarely alive under stones at 12 m depth. We here select Réunion Island as the type locality. Uncommon.

Distribution: Indo-Pacific from Madagascar to Japan.

Genus *Parviterebra* Pilsbry, 1904.

Type species (o.d.) *P. paucivolvis* Pilsbry, 1904 (Japan).

Diagnosis: Characterised by the absence of any subsutural groove, and its rather elongate shape with long, gradually tapering body whorl.

Parviterebra turriformis sp. n.

(Fig. 55)

Description: Shell turreted in shape, spire about 1,5 length of aperture. Protoconch of about 1,5 smooth whorls. Teleoconch of 5 whorls; sculptured by 12 axial ribs per whorl, each rib swollen at shoulder into a weak tubercle; no spiral sculpture other than about 22 spiral lirae on base of body whorl; interspaces between basal lirae bear very fine axial riblets. Columella concave; outer lip of aperture is thin (but specimen juvenile). Colour pink, with a yellowish zone at shoulder, nodules white. Dimensions: $7,8 \times 2,7$ mm (holotype).

Type material: Holotype MNHP, *Marion-Dufresne* expedition, Stn CP 57, $21^{\circ}05'S$, $55^{\circ}11'E$, 210–255 m, empty shell, plus one paratype NM (NM K3983/T66).

Notes: No other species is comparable with *P. turriformis*, on account of its distinctive colour pattern and sculpture.

Etymology: Named after the turreted form of its spire.

COMPARATIVE STUDY OF THE SPECIES CITED BY DESHAYES (1863)

- n° 437 *Columbella turturina* Lamarch—confirmed (Fig. 8).
 n° 438 *Columbella flavida* Lamarch—a synonym of *Pyrene flava* (Bruguiere, 1789)—confirmed (Fig. 1).
 n° 439 *Columbella varians* Sowerby—confirmed (Fig. 7).
 n° 440 *Columbella puella* Sowerby—we have never found this species.
 n° 441 *Columbella tessellata* Deshayes, 1863 (*non C. tessellata* Gaskoin MS.). This is *Mitrella moleculina* (Duclos, 1840)—confirmed (Fig. 19).
 n° 442 *Columbella pusilla* Deshayes, 1863 (*non C. pusilla* Sowerby, 1844 which is a West Indian species). This is *Mitrella raphaeli* sp. n.—confirmed (Fig. 22).
 n° 443 *Columbella hanleyi* Deshayes, 1863—confirmed (Fig. 16).

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